TECHNOLOGY DEPT.

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · MACHINERY · PARTS · ACCESSORIES · TOOLS

Vol. 14. No. 1922 | Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y. Under Act of March 3, 1879 | NEW YORK, FRIDAY, FEBRUARY 17, 1933 | 5 Cents. $12 Per Year.

DETROIT

First Copy

Willys and Miller Named Willys-Overland Receivers In Protective Movement

Friendly Action Is Taken to Conserve Interests of Stockholders and Creditors; Reorganization Is Planned

Toledo, Feb. 16.—The Willys-Overland Company was placed under receivership late Wednesday upon the filing of a petition in Federal Court by the Monroe Auto Equipment Company, Monroe, Michigan. Judge George Hahn immediately appointed John N. Willys, board chairman, and Linwood A. Miller, president, as receivers, each giving bond of $100,000.

The receivers were empowered to continue operation of the plants, borrow funds and develop current business. An injunction prevents legal action being brought by other creditors without the court's permission. Mr. Willys, it was understood, left promptly for New York, believed to be on a financial mission.

The Monroe Company, in which C. O. Miniger, president of the Electric Auto-Lite Company, is reported

John N. Willys

L. A. Miller

to be heavily interested, asserted a claim for $17,105 for merchandise delivered in January. With Mr. Miniger, a director of the Willys-Overland, the action was considered friendly.

A statement issued by Mr. Willys and Mr. Miller after their appointment stated the receivership was asked to permit a reorganization of the capital structure of the company to preserve working capital and to maintain employment as far as possible.

In the joint statement Mr. Willys and Mr. Miller said: "We have every reason to believe that the production of passenger cars and of trucks for the International Harvester Company will be continued."

The interest of many manufacturers throughout the country who have aided the Willys-Overland in its operations will be cared for in every possible way, the receivers said.

Mr. Willys said: "Had it not been for the continued delay in improvement of general business it would

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PLAN TRUCK SURVEY IN NEW JERSEY BILL

Trenton, N. J., Feb. 16.—Motor truck regulation in various forms was before both branches of the Legislature last night. Senator Barbour of Passaic sponsored a joint resolution to direct the Public Utilities Commission to make a survey respecting the extent and character of this form of transportation, the necessity for regulation and all other factors bearing on the subject.

Senator Woodruff of Camden introduced a bill which would place regulation of motor trucks under jurisdiction of the utilities board. The measure is designed to carry

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TRUCKING OFFICIAL OPPOSES REGULATORY BILL IN BAY STATE

Boston, Mass., Feb. 16.—Alfred A. Beauregard, representing the Somers Transportation Company of Springfield, appeared before the Committee on Transportation in opposition to the bill which would place the trucking business under the jurisdiction of the State Department of Public Utilities.

Mr. Beauregard took the position that the state should not enact what he termed as harmful legislation against the trucks when they, during the World War and afterward, handled business which the railroads did not want to handle.

"It was because of the impetus given the trucking business during the war, when the roads asked us to handle the short haul business because they were not in a position to do it, that the trucking business in its present form was born," Beauregard declared.

It was pointed out by the speaker that under the trucking system of transportation it would be impossible for a monopoly to be developed, for if the rates charged by the monopoly were too high, the shipper could make use of the highways to trans-

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FEDERAL NAMES LOUD SPECIALTY SALES HEAD

Detroit, Feb. 16.—Appointment of Carl Loud as head of Federal's new factory specialty sales department is announced by J. B. Bowman, vice-president in charge of sales of the Federal Motor Truck Company.

J. F. Bowman

Mr. Loud is an executive of extensive experience in the specialty field. He was formerly associated with the Divco-Detroit Corporation and the Thorne Gas-Electric Company, Chicago.

Mr. Loud will work very closely with Federal distributors and lend constructive assistance in developing sales. Organization of the factory specialty sales department was prompted by the very encouraging response accorded Federal's house-to-house delivery equipment, recently placed on the market and by a very thorough analysis which revealed definite possibilities in this field.

G. M. T. IMPROVES TWO TRUCK MODELS

Pontiac, Mich., Feb. 16.—Improvements and refinements in two light-duty truck models, engineered and built for high speed delivery service, are announced by the General Motors Truck Company. The changes affect the T-18 and T-23 of 1½-2 tons and 2-3 tons capacity, respectively. The improved models are powered by the new G. M. C.

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NEW FORD TRUCKS ON 112-INCH CHASSIS SHOWN IN NEW YORK

New York, Feb. 16.—Ford has placed on exhibit here a new sedan delivery model and a new station wagon mounted on the new 112-inch wheelbase chassis which was announced and described in these columns last week. These, as well as a standard panel delivery and an open pick-up model, will be available on the same chassis, which will be fitted with either the new aluminum-head eight-cylinder engine used in passenger car chassis, or with what is described as an "improved" four-cylinder engine.

The latter has the same dimensions and power output as formerly (3⅞x4¼, 50 brake-horsepower at 2,800 r. p. m.), and is the same in general design, but is fitted with a new counterbalanced steel crankshaft. In external appearance the new four-cylinder engine shows a slight change in the exhaust manifold and rear engine supports, judging from photographs only. No trucks with the four-cylinder engine have been received here as yet.

To date, the only particulars concerning price to be received are to the effect that the sedan delivery will list at $520 when equipped with the four-cylinder engine. It is assumed that the chassis will list at $320, as it is virtually identical with the new passenger car chassis at this price. It is also assumed, though not yet confirmed, that the price differential as between four and eight-cylinder engine chassis will remain at about $50.

Both the sedan delivery and the station wagon bodies have been increased in length. The former has a load space 59 inches long, 45 inches wide and 42 inches high, and gives a carrying space of about 60 cubic feet, or about 50 per cent. more than the preceding model. This body is fitted with a rear door 36 inches square, and the door has a window which can be lowered with a regulator,

(Continued on Page 2)

January Commercial Car Sales Running 11% Below 1932 Level

Reports from Fourteen States Indicate That Truck Sales Total for Month Will be About 13,106; Figures Show Sales Decline Halted

Detroit, Feb. 16.—R. L. Polk & Company today released January commercial car sales figures for fourteen states and the District of Columbia, showing a total of 3,230 units this year against 3,640 in the same territory and the same month of 1932.

This showing, which represents a drop of about 11¼ per cent this January from last, is by no means a poor one, judged by recent trends in the sales field. In fact, the rate of reduction in truck sales this January is lower than it has been in most recent months.

It is pointed out here that this reduction in the rate of sales decline is a phenomenon that has been looked for as a sign of imminent revival.

If commercial vehicle sales from the thirty-four states and the District of Columbia, still to be heard from in regard to January sales, maintain the same ratio as the fourteen that we already have, the total truck sales for January, 1933, will be about 13,106. This would compare with 14,767 in January, 1932.

STUDEBAKER SALES IN JANUARY TOPPED DECEMBER BY 62%

South Bend, Ind., Feb. 16.—Retail deliveries of Studebaker passenger and commercial cars in January were 62 per cent. more than December. This gain is considered encouraging by comparison with the seasonal 4 per cent. January drop under December that is the Studebaker average of the past ten years.

It is interesting to note that each ten-day period of January saw an increase over the preceding ten days. The third period was 75 per cent. above the second; the second period was 6 per cent. above the first, and the first period was 32 per cent. above the last ten days of December. Present indications are that further gains will be recorded in February.

The sales stimulus supplied by the big automobile shows and reports from Studebaker dealers in major points that people are showing a "more intelligent" interest in the new cars than last year are regarded by Studebaker executives as wholesome signs.

INDIANAPOLIS SHOW CRAMPED BY WEATHER

Indianapolis, Ind., Feb. 16.—A disappointing week of automotive sales effort ended here Sunday with the closing of the automobile show, which was seriously impeded by one blizzard after another, sandwiching ten below zero temperatures in between.

After five days of extreme weather conditions that kept the usual show crowds at home shoveling snow and firing furnaces, the Indianapolis Automobile Trade Association, under whose auspices the show is held each year, decided at a meeting of the board of directors to keep the exhibit open two days beyond the original closing date, set for Friday, February 10, hoping for a better turn in conditions, which did not show itself until the very end of the show approached.

Business, of course, was hampered noticeably by the unfortunate turn of the elements, which left street slippery and treacherous, precluding

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HOLIDAY SCHEDULE

In observance of Washington's Birthday holiday, Wednesday, February 22, Automotive Daily News will not be published on that day.

PLYMOUTH SALES GAIN IN FEBRUARY

Detroit, Mich., Feb. 16.—Additional gains in both retail deliveries and factory shipments of Plymouth cars compared to corresponding periods in 1932 were reported here today by H. G. Moock, general sales manager of Plymouth Motor Corporation.

H. G. Moock

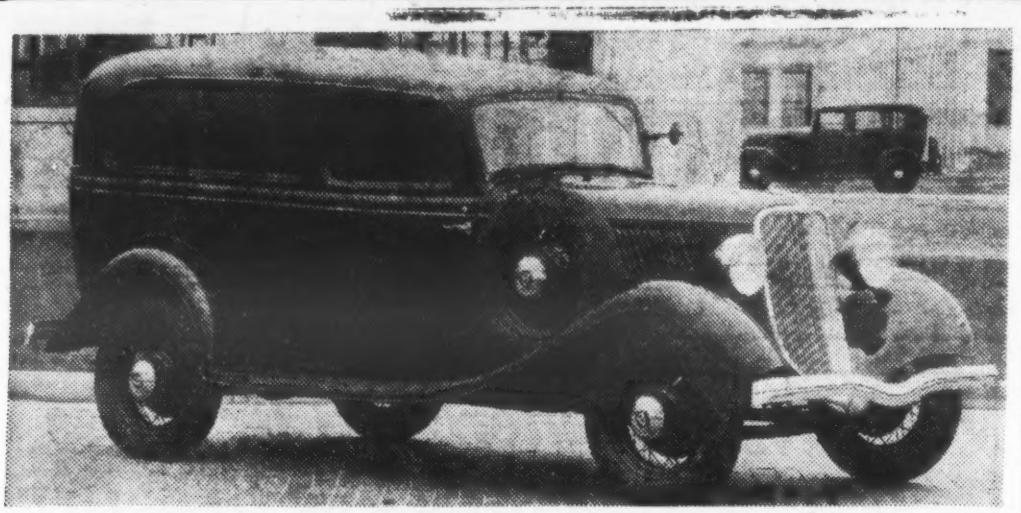
Retail deliveries of Plymouth Sixes throughout the United States for the week ending February 4—the latest available figures—are 281.4 per cent. of retail deliveries for the week ending February 6, 1932, the corresponding week. That same week, according to Mr. Moock, factory shipments of Plymouth cars to Dodge, De Soto, and Chrysler dealers were 253.7 per cent. of the corresponding week a year ago.

"In addition to these increases in retail deliveries and shipments," said Mr. Moock, "our Dodge, De Soto and Chrysler dealers report a bank of unfilled orders for Plymout cars on hand the week ending February 4 which amounts to 207.5 per cent. of their unfilled orders the corresponding week in 1932.

DISTRICT OF COLUMBIA JAN. SALES OFF 26%

Washington, Feb. 16.—The Washington Automotive Trade Association disclosed today that January passenger car sales this year were 848 units, as against 1,154 in the same month of last year.

This represents a drop of about 26 per cent. from the sales level of a year ago. Dealers here feel that there is considerable delayed buying, which will come into the market in March and April. They believe that the showing in later months will be considerably better, even in comparison with that of 1932.



NEW FORD SEDAN delivery model. The chassis and the front end of the body are substantially identical with the 112-inch-wheelbase passenger cars.

New Ford Trucks on 112-In. Chassis Shown in New York

(Continued from Page 1)

thus providing excellent ventilation in combination with the adjustable windshield, which has the same type of regulator fitted on passenger cars. Both the station wagon and the sedan delivery have windshields that are given a 20 degree backward slope and radiator grilles identical with those on the new passenger cars. They also include certain of the de luxe features, such as two horns and two cowl lamps used on passenger cars. Two folding front seats are provided in the sedan delivery body, the driver's seat being adjustable fore and aft. The body interior is lined with Masonite panels and has an artificial leather head lining. Running boards and fenders are the same as on passenger cars. Except for their greater length, station bodies are similar to those formerly provided, although the sloping windshield changes the front pillar and door lines slightly. This body is finished in natural wood, and the hood is light buff, whereas the sedan delivery is all black.

Standard panel and pick-up bodies, judging from photographs only, are very similar to those of last year, but are either lengthened slightly or have less overhang because of the lengthened chassis. These jobs have fenders without skirts and metal running boards which are not rubber covered.

So far as is known here, the Ford truck chasses have not been altered, except that they presumably will be available with the new aluminum-head eight-cylinder engine and with the altered four-cylinder engine at purchaser's option. Load space on the platform and stake-type bodies have been increased, however. The former has a load space 145⅝ inches long and 87 inches wide and the latter a load space 142⅝ by 82 inches. Both these bodies are available on either 157-inch or 131½-inch chassis. No changes in truck prices have been announced here.

H. T. EWALD TO ADDRESS ADVERTISING FEDERATION

Grand Rapids, Mich., Feb. 16.—Henry T. Ewald of Detroit, president of Campbell-Ewald advertising agency, has been chosen program chairman for the convention of the Advertising Federation of America, which meets here June 25.

H. T. Ewald

Ewald is chairman of the board of the American Association of Advertising Agencies, and founder and former president of the Detroit Adcraft Club.

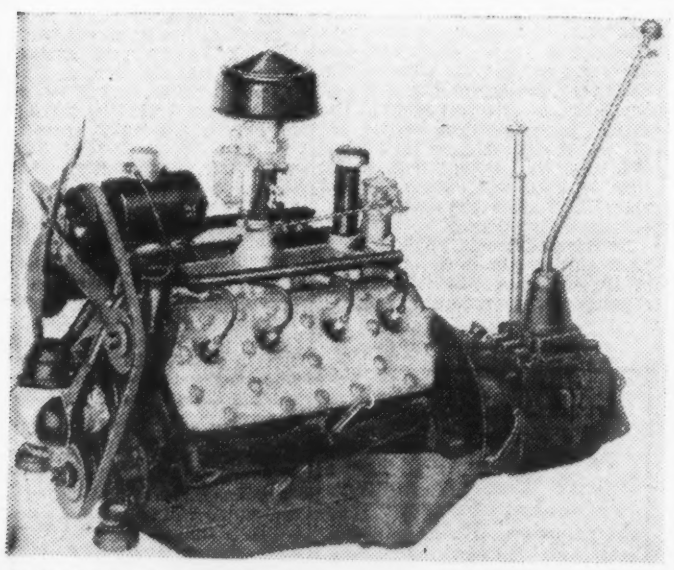
HURLBURT TO HEAD ANSONIA DEALERS

Derby, Conn., Feb. 16.—N. W. Hurlburt was elected president of the Ansonia, Derby, Shelton & Seymour Automobile Dealers Association at the annual meeting recently at the Hotel Clark here. John Lombardi, Sr., was chosen vice-president, Edward Yudkin secretary and Horace Fosdick treasurer.

The association voted not to hold an automobile show this year, due to general conditions in the Naugatuck valley, which make such a project impracticable. The show has been an annual feature for many years. Discussion of legislative matters also featured the meeting.

NEW VT. COMMISSIONER

Montpelier, Vt., Feb. 16.—Murdock A. Campbell has been appointed commissioner of motor vehicles for Vermont by Gov. Stanley C. Wilson, succeeding Charles T. Pierce. He has announced retention of the department's entire personnel.



NEW FORD eight-cylinder V-type engine with aluminum cylinder heads and various detail changes.

FINANCIAL NEWS

RAYBESTOS

New York, Feb. 16.—Raybestos-Manhattan, Inc., preliminary statement for 1932 reports net loss after taxes, depreciation and other charges of $457,167, contrasted with profit of $553,992, before inventory adjustments which were charged against surplus account, in 1931. Balance sheet as of December 31 shows current assets of $6,277,670, equivalent to twenty times current liabilities of $312,630. There were no bank loans, bonds or other funded indebtedness. Company reports net current assets equal to $9.21 a share on capital stock, and cash and cash funds of $3,325,067, equal to $5.12 a share on stock in hands of public.

YELLOW TRUCK

Chicago, Feb. 16.—The Yellow Truck and Coach Manufacturing Company reports sales for 1932 of $16,437,874, against $26,948,154 for the preceding year. The net loss after expenses and charges was $3,787,051, against $2,762,336 for 1931. The statement included the company's proportion of the net profits or losses of subsidiaries not fully consolidated.

TRICO PRODUCTS

New York, Feb. 16.—Trico Products Corporation and subsidiaries for 1932 reports net profit after depreciation, Federal taxes and other charges of $964,964, equivalent to $2.57 a share on 374,991 unrestricted shares outstanding, compared with $1,762,550, or $4.70 a share, in 1931.

UNION TWIST DRILL

New York, Feb. 16.—Union Twist Drill Company for 1932 reports loss after depreciation, taxes and other charges of $336,970, compared with $70,178 loss in 1931. Reserve for $30,270 foreign exchange loss during 1932 was charged to suplus, compared with reserve of $15,017 charged to surplus in 1931. Current assets as of December 31 were $1,713,811, and current liabilities, $28,907, compared with $2,274,103 and $42,133, respectively, at close of preceding year.

MUNCIE GEAR

Muncie, Ind., Feb. 16.—Muncie Gear Company for 1932 reports net loss after expenses and other charges of $81,365, against $93,038 loss in 1931.

GEMMER

Chicago, Feb. 16.—Gemmer Manufacturing Company for 1932 reports net loss after taxes and interest of $41,092, non-recurring charge and other deductions $178,685, compared with $230,103 loss in 1931. Frank E. Phillips has been elected a director, increasing the board to six members from five.

RUSCO EXECUTIVE QUITS

Middletown, Conn., Feb. 16.—Peter J. Goldner has resigned as secretary of the Russell Manufacturing Company, this city. He joined the company in 1922, and succeeded the late Henry W. Hubbard as secretary. Recently he had been in charge of the accounting and cost divisions, which are now being supervised by Charles C. Lyman and G. Alden Hastings.

SPARKS from DETROIT

In the Bread Basket

* * *

Show Success

* * *

Wary Walkers

* * *

Helping Along

* * *

Chris Sinsabaugh
Detroit Editor

MICHIGAN'S banks closing for an eight-day holiday was like some one giving us a sock in the stomach. We've been gasping for a couple of days but now, as we are regaining our breath, we find it might be worse. And it looks at this writing as if the worst is over.

Those I have talked to as to the effect all this will have on automobile sales in Michigan tell me that while the tightness of the local money market may slow sales temporarily, they look for a resumption of sales activity within a short time. Toledo and Chicago both went through similar experiences and survived.

* * *

FOLLOWING the formal statement as to what was discussed at the meeting of the N. A. C. C.'s sales managers meeting in Detroit, Monday, Alfred Reeves, before he returned to New York, gave me the reaction of the committee as to the successful national shows in New York and Chicago.

Chicago's wonderful showing, with an increase of 30 per cent. in attendance and heavy sales, was particularly emphasized at the meeting, the vice-president of the N. A. C. C. said.

The reason for the Chicago success, he declared, was because of the same old interest being shown by every one in the new offerings of the industry, supplemented by the most vigorous promotion work ever carried on in Chicago, and because every one boosted the show. Another important factor was the very attractive action show staged, which dramatized the industry and its products so affected. This and the fifty-cent admission brought out the crowds.

* * *

IT IS ADMITTED that the seventy-five-cent admission at New York hurt the gate, but then it was an experiment on the part of the show committee of which C. D. Hastings of Hupmobile was chairman. It decided to try New York at seventy-five cents and Chicago at fifty and now that Chicago proved its case, it is more than likely that New York next year will cut to fifty cents also.

Both New York and Chicago this year allotted larger spaces than heretofore, which permitted a better display of demonstrating apparatus and also made it possible to exhibit more models. Larger spaces and the radical broadening of show rules make Reeves believe that private displays hereafter will not be necessary because of the improvements in the way of attractions in the main show.

* * *

"DEAR MR. SINSABAUGH," writes H. J. Houpert of Rye, N. Y., well-known automotive engineer, "quite a pompous way for an old-timer to address another one, but, although I read your column every day, I never have had the pleasure of meeting you. Now that we know each other thoroughly, here goes my story.

"I enjoyed your description of G. K. Barrett and yourself following that early road race on a tandem; it brought to my mind an experience of my own.

"In 1903 I was sent to deliver a two-cylinder Renault from New York to Newport, N. H. As far as about Lowell, Mass., things went as good as could be expected, considering stopping the car for thank-you-ma'ams and often the engine for every horse I met on the road.

"But the farther north I was getting the poorer the fuel. Buying my fuel from hardware stores, I was running on more kerosene than gasoline. Now comes the crux of my story.

* * *

"ON THE FOURTH or fifth day, or possibly more, I started in the morning for my goal, Newport, less than ten miles away. I started early, taking no chances. Well, just as I was starting I passed on the road a tramp going my way. Very condescendingly I offered him a lift, which, for some reason, he wisely refused. I thought, 'It's your hard luck, old boy.'

"Half a mile further my engine decided to take a rest, and it was some time before I got it going again. In the meantime my walking friend passed me with a faint smile. The same operation was performed five or six times during the day, the two of us passing each other as regular as clockwork. However, between 5 and 6 p. m., as I had given up hopes of winning the race, I passed my opponent again and entered Newport triumphantly at least two lengths ahead of him."

* * *

AT LEAST ONE OIL COMPANY in Detroit realizes the

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Retail Salesmen — This Is Your Page

This department is devoted to the interests of the retail sales division of the industry. Salesmen, this is your department. Automotive Daily News wants you to get something from this department that will help you in your work on the firing line. It wants you to pass on your own experiences, success, failures to help your brother salesmen. Send in your story in the form of a letter, or even a postal card, and let us get it ready for publication. Your achievement or your mistake may help another salesman to make sales or avoid errors that cost you commissions.

Dealers read this page. Give us the benefit of your reactions on these problems that affect the work of your salesmen, the men on the firing line, the men who bring home the bacon or don't.

CLUB MEMBERS AID THIS TRUCK SALESMAN TO GET PROSPECTS

By A. W. WILLIAMS

Joe Lauffer, national account salesman for International Harvester trucks at Louisville, Ky., recently secured the best truck order placed in that city in some time, and one that a lot of companies were after, this particular order calling for twenty-seven new units, going to the Kentucky Transport Corporation, J. C. Fisel president, contract carriers for Great Atlantic & Pacific Tea Stores. Seventeen of the units have been delivered and ten more will be delivered within the next thirty days.

The units are 1½-ton tractor types, for use with Fruehauf semi-trailers, using fourteen-foot, round nose, box types of inclosed bodies.

Fisel had to replace larger equipment with these new units as a result of old equipment having been made obsolete for use on Kentucky highways, under the new state regulatory acts. On the tractors delivered twelve obsolete types of tractors were traded in and since have been disposed of, while Fruehauf took in seven semi-trailer body units.

In addition to the Kentucky Transport Corporation, J. C. Fisel is also head of the J. C. Fisel Company, common and general carriers. Fisel in his two companies operates a total of 175 trucks, of which ninety-one are International units.

Lauffer is also president of the City Salesmen's Club of Louisville. In a recent discussion regarding the latter club and what it meant to him as a salesman, he remarked:

"We are told that it is the only salesmen's club of its kind in America, a club built and operated on the reciprocity system, with the idea of by helping the other fellow you help yourself."

This club meets every Tuesday for luncheon, at 12.15, allows no long-winded speakers to take the floor, and is composed of but one representative from any given line of business. Its members meet, discuss and interchange business information and prospects.

For instance, some weeks ago it was Mr. Lauffer's week to be given special prospect aid and co-operation. At the next meeting his report on results indicated poor results shown, and he was given another week, wherein members went ut of their way to dig up prospects for him, resulting in a number of sales directly traceable to this co-operation.

The members become acquainted with one another, with the lines they handle, and plug for these lines. For instance, the Morton Salt Company was unable to get into certain stores in Louisville, but the club members and their families started asking for Morton's salt at these particular stores, until the owners stocked it.

On January 31, displays of members' merchandise were made at the luncheon meeting, with the members' wives present, this giving them a better opportunity to know the lines sold, and to be in position to ask for them in buying their own requirements. Mr. Lauffer couldn't very well put a truck on the second floor of the Fort Nelson Hotel, in the ballroom, but he had a display of miniature trucks.

Each week three names are drawn and these three members are given an opportunity to take the floor and discuss the products they are selling, and offer suggestions as to how the other members can co-operate with them to improve the sales, or help. The club is built on reciprocity and sales promotion, has eighty-three members, and average attendance for the past year was fifty-three at each luncheon meeting. The club was organized just two years ago last October. One of its enforced rules is suspension of any member who skips three consecutive meetings without a sound excuse.

Nearly all members of the organization are in some sales endeavor wherein the companies they represent own and operate trucks, salesmen's cars, etc., and all are in position to do a considerable amount of boosting within the organizations they represent and among friends and acquaintances.

There is an initiation fee of $5, but no dues, members merely paying for their luncheons each week, at a very reasonable cost.

The list of members of this club includes representatives of many of the leading business and industrial concerns of the city, including many large users of trucks.

As Mr. Lauffer remarked: "This club represents a small investment to the members. It puts the members in weekly touch with representatives of eighty-three different types of business. It gives members an opportunity of knowing a good deal of what is going on in other industries and business lines. It represents the best sales promotion investment that I have ever made. I would advise salesmen similarly situated in other cities to consider the possibilities of this plan, and endeavor to promote similar clubs in their cities. It can be done. We started with a small membership here and have grown steadily, and interest has been maintained.

"Either directly or indirectly it has brought me many prospects and a considerable number of sales. It is not only the prospects contained in the probable needs of the companies represented by the other members, but the boosting they can do for your product, and the possible tips they can give you regarding others, including friends, relatives, gossip overheard of this or that consumer who is considering replacements, new businesses to be established, and what not. I have secured a number of red hot prospects from this source, that I otherwise would have had no possible way to learn of or to contact, until after they had bought.

"Our members are very enthusiastic regarding the success of this club, and the large weekly attendances indicates that the members figure the meetings are too valuable in a business way for them to afford to miss. In a number of instances members are executives of the companies they represent.

"For instance, the wholesale grocer member, wholesale drug member, wholesale baker member, etc., especially if he happens to be an executive of the company he represents, may not be in the market for anything himself, but he frequently hears a lot of gossip regarding his competitors. He may know that another wholesale grocer is considering some new trucks, or that the contract carrier for that company is going to buy some new equipment. There are so many possibilities for prospects, especially if the member is a live wire, fraternizing and working, instead of sitting quiet like a bump on a log."

Other automotive members of the club include J. Walter Sanders of the Louisville Motors Company, Ford dealers, and Louis Augustus, representing Fruehauf trailers.

CROWDS AND SALES AT CAMDEN SHOW REPORTED AS GOOD

Camden, N. J., Feb. 16.—Camden's thirteenth annual automobile show opened in Convention Hall yesterday with large crowds and good sales.

H. Merrill Nicholson of Stratford, president of the Camden Automobile Trade Association which is sponsoring the show, predicts success, both from a sales and attendance standpoint, this year.

"Of course," said Nicholson, "times have not changed to any considerable extent since last winter's show in Convention Hall. Value is still importat but a close examination of new models will reveal that the manufacturers of no other American commodity have gone quite so far in their efforts to raise quality and lower prices as the builders of motor cars.

"Automobile manufacturers are firmly convinced that they alone will lead the way back to business normalcy and launched their plans accordingly. The important fact confronting them was that the American people had suffered much in income since 1929 and that the car for 1933 had to be built and priced on a parity with their reduced purchasing power."

In addition to the exhibition of cars, entertaining programs have been arranged by the Camden Automobile Trade Association. Besides Nicholson, its officers include John S. Ingram of Haddon Heights, vice-president; C. B. Richardson of Haddonfield, secretary, and John H. Gardner, jr., treasurer.

Sponsors of various type cars in the show follow:

Buick and Pontiac, N. J. Automobile Supply Company; Lincoln and Ford, Eggie and Son: Dodge and Plymouth, Watson Shallcross, Inc.; Chevrolet, H. R. Nicholson, Inc., Randolph Chevrolet, Inc. and Rohrer Chevrolet; Studebaker and Rockne, MacFulton, Inc.; Packard, Chrysler and Plymouth, Henry S. Volmer; Cadillac and La Salle, Camden Cadillac Company; Oldsmobile, Ingram Motor Sales Co.; Pierce-Arrow, H. A. DeHart & Son; De Soto and Plymouth, Walter M. Viegel; Hudson and Essex, Gomery-Schwartz.

SEATTLE DEALERS ADVANCE SHOW PLANS

Seattle, Wash., Feb. 16.—With William O. McKay as general chairman, the Seattle Automobile Dealers Association is opening the throttle wide for the 1933 Greater Seattle Automobile Show.

The dates are February 28 to March 5 inclusive, with two floors of the Civic Auditorium to be used this year, as compared to half that space last year.

Carl R. Heussy, managing-secretary of the Seattle association, has been appointed manager of the show, while Don Mills will handle publicity, in conjunction with the advertising and publicity committee, which consists of S. L. Savidge, chairman; T. D. Davies, C. B. Ballard, Hugh Baird and P. N. Norton.

Other committee appointments are as follows: Building and space, Leon Titus, chairman; S. S. Sayres, P. E. Sands, Stanely Nelson, E. L. Howard, O. F. Kastner; Entertainment, A. F. Blangey, chairman, S. L. Savidge, E. G. Brace, Gus Hoffman and J. E. Clark; Decorations, Fred Kurz, chairman; P. E. Sands, Dare E. Marriott, August Johnson, H. L. Wilson and George Arlund; Rules and Regulations, W. L. Eaton, chairman; Dean Howard, W. S. McNamara, A. B. McConnell and Max Whitcomb; Finance, A. S. Eldridge, chairman; W. O. McKay, A. R. Tyson, Fred Lamping, P. E. Sands and Walter McFarland.

Dealer Activities

PHILADELPHIA

The Burnshaw Automobile Corporation, headed by Edward W. Burnshaw, Jr., has opened a Ford dealership, including a full line of Ford products, at 4225-31 Chestnut St.

* * *

West Philadelphia Buick-Pontiac, Inc., has obtained as service adviser to look after the interests of Oakland and Pontiac owners in the service department at 4810-16 Chestnut St. Walter Hilliard, who has had fourteen years' experience in such servicing work.

* * *

ATLANTA, GA.

Five members of the sales staff of the Boomershine Motors, Inc., local Pontiac dealer, "stepped out" during the month of January and registered the biggest used car month for winter in the history of the company. The salesmen, Benny Mack, Jack Windham, Check Gunnin, Dick Carpenter and H. L. Mayfield, used car manager, sold over fifty units, accomplishing this feat without the aid of a special discount or allowance.

* * *

J. M. Harrison & Co., which for many years has been recognized as one of the outstanding automobile dealerships of the Southeast, has acquired the franchise for distribution of Dodge and Plymouth cars in the Atlanta territory.

* * *

The Denney-Marmon Company, headed by W. C. Denny, one of Atlanta's pioneer automobile dealers, has just been appointed distributor for Auburn automobiles in this territory.

* * *

PITTSFIELD, MASS.

appointed Brewster Bros., Inc., 196 South St., as a De Soto and Plymouth dealer for that territory.

* * *

ROXBURY, MASS.

Dorchester Garage Auto Sales, Inc., 18 Washington St., has been named De Soto and Plymouth dealer.

USED CAR GROUP ELECTS

San Francisco, Cal., Feb. 16 (UTPS).—The San Francisco Used Car Managers Association (a branch of the Motor Car Dealers Association), announces that Charles Welch, manager of the used car division of Earle C. Anthony, Inc., has been elected chairman for the ensuing year.

DIESEL POWERED

Sterling MOTOR TRUCKS LA FRANCE REPUBLIC

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More than enough to pay the high taxes, license fees and other burdens placed upon truck transportation by unfair legislation

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These are messages of vital interest to you—here is your chance to turn your losses into profits.

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STERLING MOTOR TRUCK COMPANY
LA FRANCE REPUBLIC SALES CORPORATION

Milwaukee, Wisconsin

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Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday, Monday and Holidays, and Tuesday, When a Holiday Falls on Monday

AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION

350 Hudson St., New York, N. Y.

O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary

Entered as second-class matter, August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879

350 Hudson St., New York, N. Y. Telephone CA nal 6-1000

MEMBER A. B. C.

Mail subscriptions to CIRCULATION DEPARTMENT, 1926 Broadway

Telephone TR afalgar 7-4300

Subscription Rates: One year, $12.00; two years, $20.00 for United States and Canada, also Mexico, Cuba and Panama

To Other Countries: One year, $15.00; two years, $26.00. Single copies, 5 cents

FRIDAY, FEBRUARY 17, 1933

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The Infant Class

PROBABLY the most interesting automotive field for speculation at the present time is found in the lowest price bracket. It is simply silly to close one's eyes to the fact that a perfectly magnificent battle is preparing in this price class with possibilities of many astonishing things happening, some of which we cannot now even hint at.

In this class we find the "big three," so to say, Chevrolet, Ford and Plymouth. The 1932 sales figures for these companies are now practically complete, only the delayed report of Iowa being missing and the returns from this single territory cannot alter the standings of these production giants.

We find Chevrolet in the lead (as it has been in four of the last six years), with Ford second and Plymouth, comparatively a newcomer, an excellent third. Chevrolet's total vehicle sale for 1932, with Iowa out, was 383,205 vehicle units, including both passenger cars and commercial cars. Ford was second with 325,255 units and Plymouth third with 111,672 vehicles of both types.

Last year found Ford practically out of production. His model A had run its course and preparations were under way for new models. The announcement of these came in the early spring but the cars were delayed and it was June before they began to get into owners' hands in appreciable quantities. In the meantime Chevrolet had taken a long sales lead, which never was overcome.

Gathering force in May, the Ford drive got into high in June with a total sales of 53,000 passenger cars, against 37,000 for Chevrolet. Gradually diminishing in monthly volume of sales both companies finished the year as noted above with Chevrolet in the lead. The latter company in December put on a slight spurt and sold more cars than it had done in November by a few score units.

The year 1933 made its chronological bow with conditions somewhat as they were in 1932. Ford was practically out of production on the models announced in the spring of last year and deep in preparation of new lines, with rumor busy as usual. Fact last week took the place of rumor to an extent with the announcement carried in Automotive Daily News of a new Ford model, carrying the same engine as the 1932 V-8, but with a wheelbase of 112 inches. The price of this model is higher in some body types but $5 to $35 lower on others, with the Fordor sedan priced at $560.

In the meantime Chevrolet had announced its new line about the middle of December. It is understood that about 55,000 of these new models had been sold up to February 1, some of the sales probably being accounted for under the December, 1932, total. Even allowing for this there is every reason to believe that Chevrolet will have sold 100,000 vehicles by March 1. Bear that in mind.

The new Ford model, already announced, can scarcely be the one that will be this company's chief weapon in the fight for supremecy in the lowest price bracket. A smaller model is coming, understood to be on a 105-inch wheelbase and carrying a lower price tag. This will be the car on which volume sales may be expected to fall. The present understanding is that the smaller model will be introduced about April 1, strikes permitting.

All this means that Chevrolet has once more got the jump on Ford; not as long a one probably as it had last June, but a head start of 100,000 sales makes a stern chase of the battle, traditionally a long job.

So much for the two leaders in sales. The third member of the lowest priced big business class, Plymouth, is doing very well to date. Introduced in June, 1931, the Plymouth, carrying floating power, has since advanced into third position in the production and sales volume race. A new model of this car is set for sometime in the spring.

In addition to the cars mentioned we have Austin, Continental and Willys-Overland in the lowest price bracket, carrying in fact lower prices than the three leaders and all anxious to make things interesting in this infant class.

An interesting battle, indeed, and the cash customer is the ultimate beneficiary.

N. J. BAR ASSOCIATION PROMISES AID TO CAR DEALERS IN CAMPAIGN

Jersey City, N. J., Feb. 16.—The executive committee of the Hudson County Automobile Dealers' Association met in the Hotel Plaza yesterday with Charles W. Kappes, president of the Hudson County Bar Association, and Edmund Johnson of the ethics committee, to discuss what may be done to remedy conditions in the county which resulted in the recent rise in automobile insurance rates.

Kappes and Johnson assured the dealers the bar association stood ready to co-operate by continuing the campaign against the ambulance chasing lawyer, and would endeavor to discourage the awarding of unduly high verdicts against automobile owners.

The dealers feel the insurance companies are unfair against Hudson county automobile owners in charging all damage suits brought in this county against the local rate. They pointed out Hudson county is the outlet for New York cars, and that a great proportion of cars from other parts of the state heading for New York or New England come through this county. Accidents caused by these drivers should not be charged against Hudson county and added to the Hudson county rate, it is contended.

The dealers also asked that the merit rating, whereby a car owner who had gone a year without having a claim made against him received a lower rate, should be restored. This was in effect for several years and proved acceptable to dealers and car owners.

It was decided to attend the dinner, Friday, of the Hudson County Safety Council, and to confer as to the best means of reducing the number of accidents in the county. Chairman Frank Mitchell led the discussion and the following dealers attended the meeting: Everett W. Cox, Peter Massoline, George Laessig, Eugene Homan, Reuben Bennett, also Duncan Stuart, secretary.

OKLAHOMA GASOLINE TAX TWO-THIRDS OF TOTAL

Oklahoma City, Okla., Feb. 16 (UTPS).—Approximately two-thirds of the entire total of $22,307,829 collected in taxes by the Oklahoma Tax Commission during the last fiscal year were supplied by gasoline taxes and auto tags, an audit by John Rogers, state examiner and inspector, showed recently. Ad valorem taxes were not included in the report. Gasoline taxes were responsible for $11,038,966 of the total amount, and auto tags for $4,763,458. Other principal sources were the gross production tax, the income tax and the corporation license tax.

PITTSBURGH PLATE BUSY ON NEW GLASS

Pittsburgh, Feb. 16.—Safety glass plants of the Pittsburgh Plate Glass Company at Creighton, on the Allegheny river near here, are running full time and have a satisfactory volume of advance orders on Duplate semi-antiglare, non-actinic automobile safety glass, officials of the company told a representative of Automotive Daily News.

Interest displayed by motorists at the automobile shows in this new type of windshield glass which goes a long way to prevent eye fatigue has stimulated business for Duplate which is used in twenty-seven lines of passenger cars and trucks. A new process of making safety glass that cuts out actinic rays of the sun and which also prevents the sun's rays from decomposing and discoloring sheets of pyrolin built into the glass to give it strength, was completed just in time to permit installation of the new product in 1933 models of Chrysler's four lines, Studebaker, Rockne, Pierce-Arrow, Marmon and others.

Experiments are being continued at the Creighton research laboratories of the company in strengthening safety glass to the point where it will resist bullets fired from high-powered revolvers and rifles. The new non-glare safety glass for windshields cuts out about 9 per cent. of fatiguing sun rays and the research laboratories are attempting to increase this volume and at the same time keep the glass crystal clear.

WOULD OPEN SUNDAYS

Oklahoma City, Okla., Feb. 16 (UTPS).—Legalization of the Sunday business of retail garages and filling stations is provided for in a bill introduced recently into the state legislature by Bob Graham, Oklahoma county representative. The business has long been permitted by common consent, but there has been some question whether garages and filling stations come within the present permit for conducting business on Sunday.

CHARGE DEFECTS IN PENNA. HIGHWAYS

Philadelphia, Feb. 16.—The Highway Users' Conference of Pennsylvania, in rebuttal of Gov. Pinchot's contention that large trucks seriously damage the state's highway, charges that decided defects have developed in some of the roads in the 20,000-mile rural road-building program sponsored by the governor. Long-established principles of highway construction have been violated and specifications set up by Secretary Lewis of the Department of highways have been ignored, it is alleged. These charges are the result of a survey of township roads in sixteen eastern counties of the state, made by Julius Adler, an engineer.

Mr. Adler maintains that an excessive amount of repair will be required on road sections where existing foundations are inadequate for even extremely light traffic, while the traffic volume on some surfaced sections of the rural system is as low as twenty-five vehicles a day. The engineer's report adds that a number of culverts and bridges on such surfaced sections are posted with signs limiting the gross load to as low as four tons, and that in at least nine of the fifty-seven sections examined distinctly poor drainage conditions violate the fundamentals of this class of work; furthermore, that where failures have occurred, or serious defects exist, as distinguished from occasional defects which naturally would occur in construction of this type, they are due to failure to apply all of the measures for proper construction of this type.

COMING EVENTS

FEBRUARY

11-17—**Toledo, O.** Toledo Automobile Dealers' Association show.
11-18—**Kansas City, Mo.** Kansas City Motor Car Dealers' Association show. George A. Bond, manager.
14-18—**Dubuque, Ia.** Automobile show.
18-23—**Columbus, O.** Automobile show in Columbus Auditorium.
22-25—**Evansville, Ind.** Evansville Automobile Dealers' Association show. Otto Hartmetz, president.
25-Mar. 4—**Seattle, Wash.** Seattle Automotive Trades' Association show.
27-Mar. 4—**Des Moines, Ia.** Automobile show.

MARCH

5- 7—**New Orleans.** Automobile show in Municipal Auditorium. Gordon Herbert, manager.
10-19—**Geneva, Switzerland.** International automobile show.

Six Truck Sales Leaders Jan., 1933--Dec., 1932

Reports published as they come in

Returns for today: Florida, Idaho, Maryland, Michigan, Minnesota, North Carolina, South Carolina, South Dakota, Utah, Wisconsin and District of Columbia.
In this table: 14 states and the District of Columbia.

JANUARY, 1933 State	Sales	FIRST		SECOND		THIRD		FOURTH		FIFTH		SIXTH	
Delaware	49	Chev	29	Ford	15	I-In	2	Reo	1				
Florida	318	Ford	149	Chev	96	Int	28	Austin	26	Indiana	5	Reo	4
Idaho	39	Chev	20	Ford	15	Int	3	GMC	1				
Illinois	852	Chev	242	Ford	199	Int	105	Dt	70	GMC	54	Dodge	36
Maryland	166	Chev	69	Ford	40	Int	13	GMC	7	Dodge	5	Autocar	4
Michigan	401	Chev	176	Ford	135	Int	34	Federal	16	D-S	8	G-R	7
Minnesota	291	Chev	147	Ford	93	Int	20	Dodge	11	DT	8	Stude	4
North Carolina	402	Chev	194	Ford	138	Dodge	18	Int	17	GMC	9	Au-DT	6
North Dakota	30	Chev	16	Ford	8	Int	4	D-G	1				
South Carolina	113	Chev	69	Ford	26	Int	6	Austin	4	GMC	3	Dodge	2
South Dakota	38	Chev	15	Ford	14	Int	5	*	1				
Utah	60	Chev	35	Ford	14	Int	5	GMC	3	Dodge	2	Reo	1
West Virginia	153	Chev	75	Ford	56	Int	13	GMC	3	D-I	2	Stude	1
Wisconsin	236	Ford	91	Chev	73	Int	18	DT	15	Dodge	10	GMC	8
Dist. of Columbia	82	Ford	38	Chev	22	Int	8	White	7	D-G	2	*	1
DECEMBER, 1932 State	**Sales**	**FIRST**		**SECOND**		**THIRD**		**FOURTH**		**FIFTH**		**SIXTH**	
Delaware	35	Ford	15	Chev	10	GMC	7	In-M-St	1				
Florida	313	Ford	170	Chev	71	Int	23	DT-FE-R	5	Dodge	4	GMC	3
Idaho	16	Ford	10	Int	3	Chev	2	Reo	1				
Illinois	480	Chev	215	Ford	214	Int	16	DT	15	Dodge	11	Fe-I	2
Maryland	138	Ford	51	Chev	35	In-W	11	B-G	6	Dodge	5	Autocar	4
Michigan	509	Ford	222	Chev	173	Int	40	Dodge	24	GMC	12	Federal	7
Minnesota	145	Ford	64	Chev	46	Int	11	DT	6	D-G	4	Reo	3
North Carolina	224	Ford	111	Chev	80	Int	10	Dodge	8	GMC	5	DT	2
North Dakota	7	Ford	3	*	1								
South Carolina	75	Ford	39	Chev	18	Dodge	5	Int	3	Stude	2	G-M-W	1
South Dakota	29	Ford	16	Chev	7	Int	4	Dodge	1				
Utah	13	Chev	6	F-In-R	2	WO	1						
West Virginia	128	Ford	58	Chev	38	D-In	9	Indiana	5	GMC	4	*	1
Wisconsin	159	Ford	61	Chev	43	Int	17	Dodge	8	DT-G	6	Reo	5
Dist. of Columbia	84	Ford	24	GMC	9	Chev	7	Dodge	4	Federal	3	DT	1

KEY TO ABBREVIATIONS AND SYMBOLS

Au—Austin; A—Autocar; B—Brockway; C—Chrysler; D—Dodge; DT—Diamond T; F—Ford; Fe—Federal; G—GMC; I—Indiana; In—International; LFB—La France-Republic; M—Mack; R—Reo; S—Studebaker; St—Stewart; W—White; WO—Willys-Overland. *All trucks in this position registered only one.

MOTOR TRUCKS SOLVED PROBLEM FOR THESE TWO CONCERNS

By S. M. NELSON

Problems of transporting livestock and poultry has been solved by two concerns with motor trucks.

One of the most troublesome problems that confronts a meat packing house is often that of adequate and economic transportation for the livestock it must handle between stockyard and plant. In many cases the yards and the plant are some distance apart and in the past the transportation problem has bothered both the packer and the civic authorities.

For example, the Dold Packing Company of Buffalo, N. Y., is located half a mile from the stockyards. Until recently the company was obliged to use one of two methods of transferring its livestock between the two points. The first way was to drive the hogs or sheep or cattle through the streets, which was obviously old fashioned and slow and interfered greatly with present day traffic. The other methods was to load the animals into railway cars, switch these cars around and finally deliver them at the packing plant.

The problem grew to such proportions that the Dold Company finally called in a transportation engineer from the Truck Equipment Company, also of Buffalo, and laid all the details of the situation before him. The engineer, after having made a study of the complete picture, finally recommended the semi-trailer tractor-truck unit. The power plant is a Ford 1½-ton job and the trailer is a Fruehauf manual semi-trailer Model B-261 with a rated capacity of 3 to 5 tons.

The stake-and-rack body which is mounted on the chassis is 25 feet long, 7 feet wide and 4 feet high. The body is divided into three compartments by gates hinged on the inside. When one-third of the load is on board the animals are driven to the front end of the trailer and the front gate is closed. The hogs or sheep, as it may be, are penned up and out of the way, while the second compartment is loaded and this is likewise closed off, while the last compartment is being filled. In this way a maximum load can be put on in a very short time and unloaded just as quickly.

This unit has a load capacity of fifty hogs weighing about 200 pounds each, eighty sheep, sixty calves, or fifteen steers. A full load can be put on, transported, unloaded and the return trip completed in about twenty minutes. This means that 1,500 hogs, or a correspondingly large number of sheep or cattle can enter the Dold packing plant during a ten-hour day. By installing this piece of equipment the Dold Packing Company is able to effect savings amounting to thousands of dollars annually.

Hauling poultry to market by motor truck has become a rather common practice, but when that market is some 1,500 miles away, the feat is quite unusual. In fact, so far as the records show, this is the all-time long-distance achievement of its kind.

The record in question was established by J. W. Bauer from Chamberlain, S. D., to Buffalo, N. Y., and the trip of some 1,500 miles was made by one of three Diamond-T motor trucks in his service. The cargo consisted of 13,000 pounds of live chickens, geese and ducks, as well as dressed turkeys and ducks.

Not the least interesting phase of the accomplishment was the economy in transportation cost. Will & Zaepfel, Buffalo commission merchants, through whom the load of poultry was sold, states that the hauling cost was approximately $200, as compared with $600 by other means of transport.

Speed vied with economy as a factor. The record set is declared to bring out vividly the place taken by motor trucks in long distance hauling perishables. Up to a comparatively few years ago trucks were utilized chiefly on long trips for transporting household goods, but more recently they have been employed to an increasing extent for hauling the products of the farm, both in intercity and interstate service.

Although the record set in this South Dakota to New York journey is a new and unusual one of its kind, impressive showings have been made for several years in the increasing percentage of live stock and produce carried by motor truck from farm to market. The development of refrigeration bodies is also placing truck transport in greater demand for handling shipments of perishable goods from producing to distribution and consuming centers.

HALL MANUFACTURING TO ENLARGE PLANT

Toledo, O., Feb. 16.—Extensions of the plant of the Hall Manufacturing Company in Toledo are being planned as the result of the industrial acceptance of the new invention, the Hall eccentric valve seat grinder for internal combustion engines.

The announcement has been made by E. A. Hall, president of the company, who said the plant's capacity will be increased to accommodate more than 200 workers.

In the announcement, Mr. Hall said he had closed a contract for the grinders with the Ford Motor Company. He said orders also had been received from Chrysler Motors, Plymouth, General Motors, Citreon of France and Willys-Overland.

The eccentric valve seat grinder is a companion to the cylinder hone around which the Hall business has been built. Manufacturers are installing the new grinder in their service garages, Mr. Hall said, opening a new field. The new grinder is said to grind a seat as closely as one ten-thousandth of an inch.

The company already has employed additional tool makers, Mr. Hall announced, adding that it will require about two months to get tool dies ready to handle the garage service tools of the company, a department made necessary by the new invention.

FORD MEMPHIS PLANT RESUMES AFTER SHUTDOWN

Memphis, Tenn., Feb. 16.—The Ford Motor Company Memphis plant on Riverside Boulevard is active again after an intermission of a week closedown. Manager B. W. Slagle reported the same number of workers employed as prior to the temporary shutdown, about 400 men.

TEXAS COMMERCIAL FAILURES DECLINE IN 1932

Austin, Tex., Feb. 16.—Commercial failures in Texas during 1932 totaled 911, or 8 per cent., less than those for 1931, when 991 failures were reported, according to figures furnished by the bureau of business administration of Texas University here. Total losses from failures during 1932 were $19,741,000 against $17,736,000 for 1931.

SPARKS *from* DETROIT

(Continued from Page 2)

necessity of getting into operation the thousands of cars that are laid up because of the inability of the owners to pay 1933 license fees. That's the Sunny Service Oil Company, which, over the signature of its president, Charles E. Austin, offers to give $100,000 in cash to the state of Michigan as an advance on its anticipated state gasoline taxes for February, and March if Gov. Comstock will extend the final license plate purchase date to March 31.

* * *

"LET'S ALL WORK TOGETHER to keep these cars running," says President Austin. "If the people are permitted to drive their cars an additional month, the state will get thirty days' extra revenue in gasoline taxes. If the people are permitted to drive their cars, they will consume so much more gasoline and oil and keep thousands of additional people employed. If the people are permitted to drive their cars thirty days longer, more tires will be purchased, more automobile parts used and there will be continual work for the garages. Thirty days more means thirty days closer to buying a new car."

* * *

SUNNY OIL also is helping out in this banking holiday by accepting checks or orders on savings accounts at its service stations during the emergency.

PLAN TRUCK SURVEY IN NEW JERSEY BILL

(Continued from Page 1)

out the tentative agreement recently reached by the National Association of Railroad and Utilities Commissioners, indorsing adequate regulation of commercial highway transport rates. Part of the plan is to eliminate rate discrimination.

Another measure by Woodruff would reduce the over-all length for combination of commercial motor vehicles and would prohibit more than two vehicles being operated in combination. The measure would reduce the maximum weight of combined vehicle and load.

The House passed Assemblyman Fort's bill, fixing a load limit on foreign trucks operating in New Jersey not to exceed the limit permitted in states in which such vehicles were registered.

NOT A FABLE

Atlanta, Ga., Feb. 16 (UTPS).—A reduction of 50 per cent. in the operating costs of the Georgia state motor vehicle department for 1932 is reported by Paul Dozier, director of the state revenue commission. The cost of operating the department was reduced from a total of $187,452.32 in 1931 to $89,498.45 in 1932.

INDIANA GAS DEALERS FIGHT TAX INCREASE

Indianapolis, Ind., Feb. 16.—Lashing its opposition at the chain store tax amendment bill, the Indiana Petroleum Marketers Association has issued a bulletin rallying the industry to battle the proposal that would boost the tax on filling stations 600 per cent.

The bill increases the chain store tax as follows:

	Present Law	Proposed	Increase
One store	$ 3	$ 5	$ 2
Two to five stores	10	10	—
Six to ten stores	15	25	10
Eleven to twenty strs.	20	50	30
Over twenty stores	25	150	125

PLANT REOPENS

Martins Ferry, O., Feb. 16.—Resumption of operations at the Benwood, W. Va., plant of the Wheeling Steel Corporation, across the river from here has given employment to upward of 200 Bellaire workers.

Cumulative New Commercial Car Registration Statistics, January, 1933

Returns for today: Florida, Idaho, Maryland, Michigan, Minnesota, North Carolina, South Carolina, South Dakota, Utah, Wisconsin, Dist. of Col. In this table, 14 states and the District of Columbia

States	Austin	Autocar	Brockway	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	Indiana	International	La France Republic	Mack	Pierce-Arrow	Reo	Sterling	Stewart	Studebaker	White	Willys	Miscellaneous	Totals	States
Delaware				29				15		2	2				1							49	Delaware
Florida	26			96		3		149	2	5	28				4			1	2		2	318	Florida
Idaho				20				15	1		3											39	Idaho
Illinois		4		242	70	36	4	199	54	3	105	2	9	1	25	6	4	13	20	3	52	852	Illinois
Maryland		4	2	69	1	5	1	40	7		13		2		2				2		18	166	Maryland
Michigan				176	1	8	16	135	7		34	1	2		7			8	1		5	401	Michigan
Minnesota				147	8	11	1	93	3		20				1			4		1	2	291	Minnesota
North Carolina	6			194	6	18		138	9	3	17				2			1	1	1	6	402	No. Carolina
North Dakota				16		1		8	1		4											30	North Dak.
South Carolina	4			69		2		26	3	1	6				1						1	113	So. Carolina
South Dakota				15	1	1		14			5										2	38	So. Dakota
Utah				35		2		14	3		5				1							60	Utah
West Virginia				75		2		56	3	2	13							1			1	153	W. Virginia
Wisconsin				73	15	10		91	8		18		2				1	1		1	16	236	Wisconsin
District of Col.				22		2		38	2		8				1				7		2	82	Dist. of Col.
Totals	36	8	2	1278	102	101	22	1031	103	16	281	3	15	1	45	6	5	29	33	6	107	3230	Totals
Delaware, 1932				11		1		10	1		5				1						1	30	Delaware, '32
Florida, 1912			1	169		14	2	189	6		26				10			1	5		5	428	Florida, 1932
Idaho, 1932				23		1		17	2		5									1	1	50	Idaho, 1932
Illinois, 1932		2		330	46	54	13	237	33		112	15	1		27	12		6	7	21	25	941	Illinois, 1932
Maryland, 193		5	4	69	1	10	1	63	10		21		6		8	1	1		1	1	2	204	Maryland, '32
Michigan, 1932				176		26	18	179	13		27	1	5		20			4		3	4	476	Michigan, '32
Minnesota, 1932				113	11	14	1	80	7		31		4		6			3	1	1	2	274	Minn., '32
N. Carolina, '32				158	1	14		118	14		15	1			1			1	2		4	329	N. Ca'lina, '32
No. Dakota, '32				14		4		11	1		21				2			2				55	N. Dak., '32
So. Carolina, '32				91		5	1	48	1		3							2			2	153	S. Ca'lina, '32
So. Dakota, 1932				13		5		8	1		8		1		3			1		1	2	43	S. Dakota, '32
Utah, 1932				20		2		32	3		10		1		1			1		1		71	Utah, '32
W. Virginia '32			1	41	1	12	1	46	6		11	1			2			1		1	7	131	W. Va., '32
Wisconsin, 1932				146	5	18		94	11		42	1			6	3		7		6	23	362	Wis., 1932
Dist. of Col., '32				37	2	1	2	28	15		4				1			1			2	93	D. of Col., '32
Totals, 1932	**	7	6	1411	67	181	39	1160	124	*	341	19	18		88	16	1	30	16	36	80	3640	Totals, '32

**Carried in the miscellaneous column. *Combined with Brockway.

INDIANAPOLIS SHOW CRAMPED BY WEATHER

(Continued from Page 1)

the possibility of demonstrating the new cars on display, but dealers in some lines reported a highly satisfactory volume of sales.

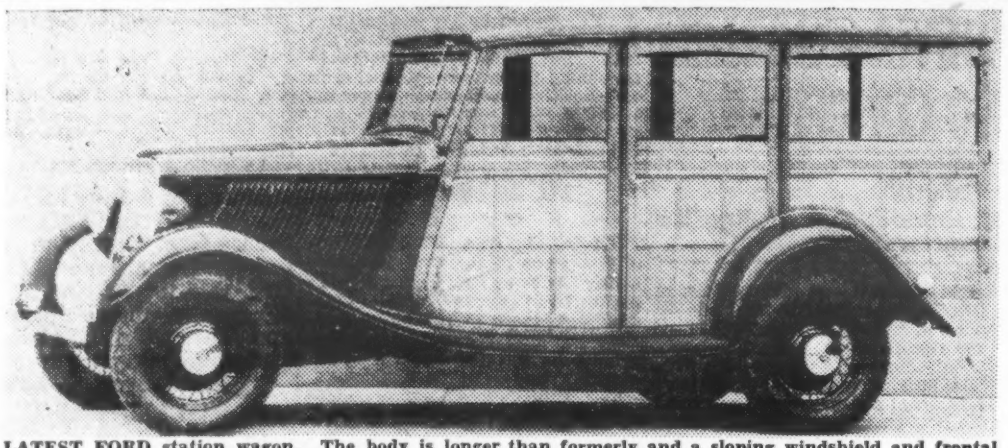
Oldsmobile was probably outstandingly successful in ringing the sales bell. With two live city dealer organizations in friendly competition, the week resulted in more than twenty cars being sold on the show floor, it was reported. In the Buick-Pontiac division of the B-O-P organization, a fair business also was reported. A particularly cheerful number of prospects from out-of-town points in the northern part of the state was listed by representatives of the lines.

In the De Soto booth a number of sales were registered. While not up to last year, the discrepancy was credited largely to failure of buyers to brave the bitterness of the season to attend the show.

Chevrolet dealers also listed large groups of prospects and reported some sales which, however, proved disappointing because of the disturbing weather. Dodge dealer likewise was very well satisfied, averaging more than a sale a day for the duration of the show.

In the high price field, Packard and Lincoln reported scattered sales, while in the other extreme of the price range the appearance of the new Ford for 1933 during the last two days of the exhibit created unusual interest. Ford dealers, however, concentrated their efforts at the salesrooms and only one model appeared on the show floor.

Indianapolis dealers generally do not anticipate a vigorous upturn in new car sales before March 1, final date for the tax assessment season and the period usually expected to usher in the spring season. Holding of the show at an earlier date than has been the custom in the past was further handicapped by this fact.



LATEST FORD station wagon. The body is longer than formerly and a sloping windshield and frontal appearance similar to the passenger car.

WOULD REQUIRE ALL MOTOR FUEL TO CARRY U. S. ALCOHOL

Washington, Feb. 16.—A requirement that all motor fuel sold in the United States shall contain at least 10 per cent. of alcohol manufactured from agricultural products by direct fermentation, would be imposed under two similar bills (H. R. 14627 and 14628), introduced in the House February 10 by Representatives Hull (Rep.), of Peoria, Ill., and Hall (Rep.), of Bloomington, Ill.

Both measures provide that domestic alcohol may be withdrawn from bond without the payment of the internal revenue tax and without being denatured, when it is to be used in motor fuels.

INTERSTATE MOTOR CARRIERS SUBJECT TO CALIFORNIA TAX

Sacramento, Cal., Feb. 16.—Interstate motor carriers are subject to the same tax (5 per cent. of gross earnings), as intrastate carriers, according to an opinion by the attorney general, U. S. Webb, to the state Board of Equalization.

HOLDEN, MCKINNEY, CLARK ADD TWO NEW ACCOUNTS

Detroit, Feb. 16.—Holden, McKinney & Clark, Inc., announces the addition of two new advertising accounts to its client list.

Effective immediately, the advertising of the Bundy Tubing Company and American Injector Company, both prominent Detroit manufacturers, will be planned and placed by that agency.

NEW RADIO LAW WOULD BAN LOTTERIES

Washington, Feb. 16.—"Section 13 is a new provision in the radio law and provides that no person shall broadcast by means of any radio station, for which a license is required by any law of the United States, any information concerning any lottery, gift enterprise or similar scheme, offering prizes dependent in whole or in part upon lot or chance, etc., and provides penalties for such offense, upon conviction thereof."

The Congressional committee says:

"The committee does not think that the United States should permit any radio station, licensed and regulated by the government, to engage in such unlawful practices. Furthermore, the broadcast of such information is unfair to the newspapers, which are forbidden the use of the mails if they contain such information.

"Your committee has substituted a new section for Section 13. The purpose of the new section is identical with the section passed by the House; but your committee believes the language of the new section more nearly places radio stations on the same basis as newspapers in connection with broadcasting information as to lotteries."

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

New Commercial Car Registrations for 1932 by Makes and States

Make of Truck	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	**Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Autocar	2			50		26	4		2		34	6					8	65	124	2			18	2	
Brockway	1			4		16	1	1	4		4	32			5		2	60	45		4		2		
Chevrolet	933	233	674	2869	696	1071	219	996	1013	247	2624	1623	1589	1282	909	715	907	1031	1811	2013	1774	626	3053	352	757
Diamond-T	2		1	30	16	23		18	2		329	47	70	44	37	19	17	25	82	25	125	1	133		28
Dodge	61	18	24	617	85	169	6	64	58	22	375	250	125	96	94	51	135	171	340	339	274	22	297	42	59
Federal	8		2	30	3	56		27	19	1	55	23	5	4	78		4	25	62	102	47	3	50	3	4
Ford	637	251	611	4956	787	982	212	1340	1091	277	2559	1532	1229	1133	1048	737	866	875	3190	2862	1666	633	2614	448	746
G. M. C.	74	7	21	336	72	119	38	39	74	16	262	192	71	101	102	59	54	126	493	189	104	23	272	14	61
*Indiana	7			43	6	14	9	10	13	2	18	158	7	6	17	2	2	21	27	7	7	3	34	31	6
International	156	31	112	443	181	252	59	186	164	77	876	571	506	295	344	195	130	304	448	417	516	141	742	187	328
La France-Rep'lic	3			25	1	6		1			20	11		4				3	14	7	5		9	1	
Mack	9		2	45	5	59	2	4	8		60	14	11	10	12	4	10	46	102	8	37	2	26	2	9
Pierce-Arrow				4	1	10					2	3	3	1			1	2	4	3			2		
Reo	21	3	4	282	31	117	13	36	18	9	119	79	85	28	34	15	43	73	206	142	100	1	135	21	32
Sterling				34		1					24			1			4	3	15		5		10		
Stewart	1	1		27		11	4				3	22			6		4	6	59	1	5		4		
Studebaker	29	11	7	283	40	34	12	6	9	5	113	161	60	38	70	8	41	28	68	142	92	7	73	15	27
White	3		5	66	17	22	1	18	17	2	44	8	4	5	6	7		40	100	21	31	2	22	5	3
Willys-Overland	3			28	25	20	3	5	6	3	66	55	35	28	24	1	9	8	18	31	31	2	33	16	27
Miscellaneous	32	11	4	560	35	48	14	143	46	12	206	62	48	43	33	31	3	41	82	91	35	10	116	11	21
State Totals	1982	566	1467	10732	2001	3056	597	2894	2544	673	7793	4849	3848	3119	2819	1844	2240	2953	7290	6402	4858	1476	7645	1150	2108

*Ten months' report. **Eleven months' report. Figures for state of Iowa not included in December. Will be published in a forthcoming issue.

New Commercial Car Registrations for 1931 by Makes and States

Name of Truck	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Autocar				91	1	46	15		6	4	41	1			3		5	73	242	18			12		
Brockway-Ind.	4	4	3	30	1	27	2	5	18		52	88	16	9	35	3	5	46	89		1	1	45		1
Chevrolet	1652	397	993	4488	1144	1472	340	1886	1869	484	4616	3338	3088	2236	1634	1610	1583	1542	2586	2956	2651	938	4356	527	1673
Diamond-T	3			50	1	44		1	1		426	51	40	46	35	17	17	73	64	31	104		128	2	17
Dodge	49	31	61	1031	146	338	12	89	86	91	642	397	311	226	179	149	297	175	654	380	288	34	414	58	151
Federal	16		1	75	13	109	1	19	13		80	14	10	3	14	3	6	36	111	90	34	3	63	3	13
Ford	1381	740	1299	11114	1977	2308	441	2895	2351	836	6135	3511	3050	2127	1612	1938	2177	1870	6407	5760	3029	954	4295	886	1864
G. M. C.	66	12	11	408	87	152	19	19	49	24	323	266	75	61	103	43	38	141	603	282	110	21	229	24	65
International	252	56	198	579	234	302	91	182	232	92	1279	754	794	508	390	449	177	383	604	522	750	148	734	255	501
La F.-Republic	7			33	1	23			3	1	6	4	2	3	1			7	33	43	31	2	8	1	
Mack	10		18	126	7	135	7	17	19	3	83	15	21	12	30	13	36	117	203	25	28	3	50	5	20
*Pierce-Arrow				3		8									1			4	3	4	1		1		
Reo	23	11	11	439	49	217	19	60	36	24	127	100	166	55	75	17	76	124	320	260	147	9	113	27	40
Sterling	2			133		15					54	3		1	1		7	6	96	1	6		28	1	
Stewart	3	7		40	1	53	3				29	53		9	11		6	8	38	5	3		6	1	1
Studebaker	17	20	1	234	61	95	4	3	11	10	158	145	166	86	70	10	101	52	137	92	120	4	87	16	70
Whippet	8			6	3		1	4	4		15	8	3	3	2	2		6	1	6	4		19	3	3
White	20	2	9	151	37	60	2	45	59	10	56	11	18	17	32	32	11	68	185	23	45	8	62	23	15
Willys	9	7	3	85	59	51	1	7	9	23	130	133	86	79	58	12	44	29	37	66	145	7	92	14	71
Willys-Knight				16		1		5	1	1	13	16	3	4	1	1	3	6	3	1	6		10		1
Miscellaneous	14	8	5	860	65	84	9	18	15	17	521	117	50	65	39	12	11	98	193	157	77	5	227	28	34
Totals	3536	1295	2613	19992	3887	5540	967	5255	4779	1620	14786	9025	7899	5550	4326	4311	4600	4864	12609	10722	7580	2137	10979	1874	4540

*Seven months' report.

G. M. T. IMPROVES TWO TRUCK MODELS

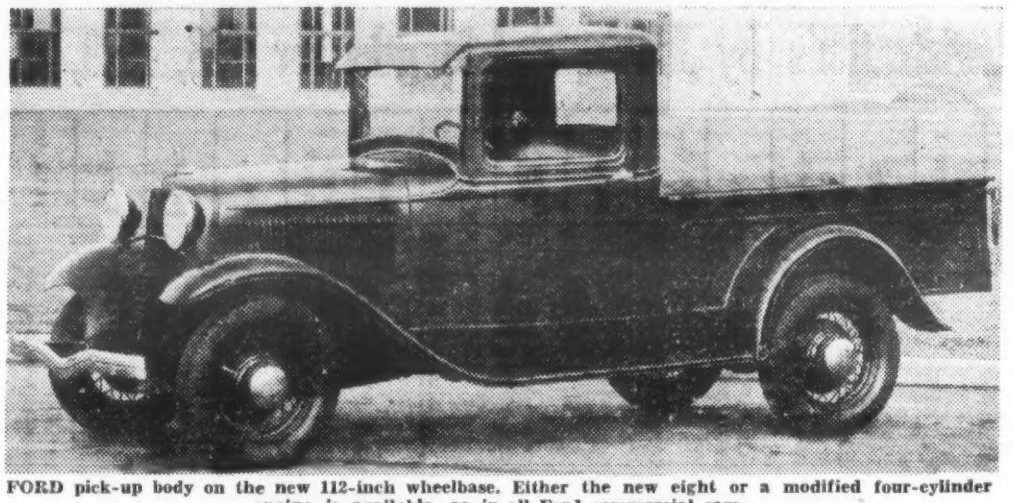
(Continued from Page 1)

221 cubic inch truck engine which the company recently presented.

Coupled with the additional power and sustained torque of the rugged "221" engine, the engineers claim to have achieved a new degree of operating and maintenance economy. Contributing to operating economy are such features as overhead valves, down-draft carburetion and a center outlet "hot-spot" exhaust manifold, while maintenance economy is insured by the use of long-lived, rugged materials and a design that provides maximum accessibility for service work when necessary.

The improved chassis have a much more attractive appearance by virtue of a new cab on both models. It is roomier and provides broader vision through an improved visor, a higher, non-glare windshield, narrower pillars and a larger rear window. An improved instrument panel, with large and easily read airplane type instruments, a non-jamming starting motor and foot-controlled tilt-ray lights make driving easier and safer.

Improvements also have been made in rear axles and frames. Spoksteel wheels have eight spokes instead of five, assuring faster dissipation of brake heat and longer lining life. The transmissions are four-speed, heavy duty, truck built.



FORD pick-up body on the new 112-inch wheelbase. Either the new eight or a modified four-cylinder engine is available, as in all Ford commercial cars.

TRENTON SHOW DRAWS BIG CROWDS DAILY

Trenton, N. J., Feb. 16.—Additional big crowds attended the eighteenth annual show of the Trenton Automobile Trade Association yesterday afternoon and last night at the Armory. The exhibitors report record gatherings. Many sales are being recorded.

Those attending the exposition are showing marked interest in the mechanism of the many new methods of motor cars shown. In fact, the public this season appears to be unusually critical and curious regarding improved devices.

Decorations of the interior of the Armory add much to the show. The decorative scheme, that of springtime, is most attractive and pleasing. A court of honor extends from East State Street to the entrance to the Armory, where a large canopy has been erected.

I. H. C. DEALERS MEET AT OGDENSBURG, N. Y.

Ogdensburg, N. Y., Feb. 16.—Twelve dealers of the International Harvester Company in St. Lawrence and Franklin counties attended a week end conference at the company's office in this city recently. M. E. Reed of Potsdam, N. Y., was in charge of the meeting.

GABRIEL KARI-KEEN MOVING TO CLEVELAND

Sioux City, Ia., Feb. 16.—The Gabriel Kari-Keen Company has suspended manufacturing operations here and removal of all equipment to the Cleveland, O., plant has started.

The plant employed 100 people in the manufacture of automobile trunks, with W. W. Wilson in charge as general manager.

ST. PAUL SHOW HELD OVER FOR EXTRA DAY SUNDAY

St. Paul, Minn., Feb. 16.—Responding to an overwhelming demand, the St. Paul automobile show was continued Sunday, although it was due to close with Saturday night. Saturday night crowds voted as a unit to hold the show over for another day when Milton Rosen, St. Paul commissioner of finance and master of cermonies at the show, put the question to a vote. Saturday the new Ford went on display at the St. Paul show.

"This show is a revelation to me," C. P. Joy of the Joy Motor Company, Packard distributors, and chairman of the Automobile show committee, said.

COLLIER IS HEAD OF STEEL FOUNDERS' SOCIETY

New York, Feb. 16.—Raymond L. Collier, for a number of years assistant managing director of the Steel Founders' Society, was recently appointed managing director of that organization, to succeed Granville P. Rogers, who severed his connection with the society to become affiliated with the Paper Cup Manufacturers Institute, New York city.

All regular services to members and other activities of the Steel Founders' Society will be perpetuated and some new projects undertaken. The society's headquarters are located in the Graybar Building, 420 Lexington Ave., New York, N. Y.

New Commercial Car Registrations for 1932 by Makes and States

Make of Truck	Nevada	N. Hampshire	New Jersey	New Mexico	New York	No. Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	So. Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Dist. of Col.	Totals
Autocar	1	1	65		334			48			144	9						2	22		7	1		32	1,009
Brockway		6	76		394			5			130	5			1	4		1	3		2			4	812
Chevrolet	111	387	2369	295	5161	1701	249	2364	1109	426	4654	282	537	260	811	3886	321	291	1771	689	669	1734	226	409	60,729
Diamond-T		44	185	9	414	10	4	74		1	128	7	5	13	11	33		13	31	27	5	125	1	25	2,239
Dodge	14	36	423	17	1241	122	31	470	134	57	1283	46	57	54	87	158	24	49	131	79	117	213	37	49	8,723
Federal	1	4	52	1	115	1		27	11	16	86	71	4	1	61	19		5	20	15	4	24		18	1,167
Ford	128	493	2380	401	6347	1430	257	3444	979	669	5421	482	492	167	668	3424	287	412	1593	1014	687	1454	231	515	66,657
G. M. C.	19	44	329	6	923	97	14	366	75	75	513	80	26	26	72	164	31	14	147	92	61	126	16	114	6,349
Indiana	1	1	59	6	64	7		106	12	7	81	1	1		20	38		6	14	10	25	11	4		924
International	24	61	569	66	1669	158	195	800	214	98	1458	68	46	138	198	815	65	112	209	311	138	432	64	107	15,676
La France-Rep'lic		4	6		5	6	1	6		1	21	1	2		1				8	1	4	3			180
Mack	4	7	105		442	8	2	46	5	3	200	7	2	4	15	23	5	1	19	12	4	11		9	1,421
Pierce-Arrow			7		27	1		13		1	11	9							1		1	1		1	109
Reo	3	17	193	4	398	17	6	172	11	19	313	51		6	12	48	9	26	52	38	41	88	7	5	3,183
Sterling			12		50			5		10	31	3									1	17		1	227
Stewart		12	49		349			36			243	2						7	4		1	7	1	1	866
Studebaker	6	12	75	5	196	6	12	136	14	25	225	4	14	17	30	47	9	2	15	66	17	93	13	7	2,425
White	1	1	152	3	1087	26		116	2	11	152	8	4	1	13	49	3	1	23	19	2	7	3	5	2,138
Willys-Overland	1	13	34	1	100		7	106	7	7	205	5	2	8	10	16	3	27	6	7	28	53	5		1,128
Miscellaneous	6	9	218	3	627	113	8	413	21	25	319	11	21	9	21	95	1	3	36	91	30	122	5	66	4,011
State Totals	320	1152	7358	817	19943	3703	786	8753	2594	1451	15618	1152	1213	704	2031	8819	758	972	4105	2471	1844	4522	613	1368	179,973

New Commercial Car Registrations for 1931 by Makes and States

Name of Truck	Nevada	N. Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	District of Columbia	Totals
Autocar	2	4	109		596	8		52		4	297	23				2		1	25	4	9			54	1,748
Brockway-Ind.	1	14	93	1	635	1	4	78	12		232	9	14	1	9	41		5	27		15	4		4	1,685
Chevrolet	160	635	3549	614	7817	2903	430	4006	1745	847	6165	405	1416	605	1382	6683	523	356	2922	1136	1214	3170	381	477	99,600
Diamond-T		30	135	15	491	29	3	52	8	1	179	20		40	6	52		5	15	14	23	165		49	2,483
Dodge	40	49	700	41	1737	255	71	625	187	87	1621	118	86	85	131	305	52	71	227	155	202	263	61	60	13,518
Federal		10	106	1	157	5		55	26	32	125	44	8	1	78	40			34	15	3	41	1	11	1,523
Ford	343	1059	5796	717	14030	2829	477	6219	1658	1632	9898	1042	1223	524	1220	6352	738	615	2829	2361	1451	3209	550	1125	138,854
G. M. C.	20	29	441	12	925	97	15	406	85	64	517	99	31	8	67	149	56	28	125	116	90	162	13	133	6,919
International	23	69	683	114	2105	290	363	976	216	153	1548	79	78	284	236	1519	101	141	302	269	257	614	87	100	21,073
La F.-Republic		4	16		44	12		24	4	13	68	4	2		2	3			24	1	6	7		2	445
Mack	12	25	264		871	23	1	85	5	34	398	27	26	2	10	34	8	4	36	32	10	18	1	16	2,945
*Pierce-Arrow			6		14			2		1	5					1						2		1	57
Reo	12	38	262	14	674	38	18	276	33	51	509	83	13	17	23	149	42	38	43	79	68	117	14	10	5,166
Sterling	1	2	54		116			24		16	106	5			6					5	2	43		6	739
Stewart		21	73		602			99			276	4			1	1		1	5		3	29		1	1,394
Studebaker	6	22	109	5	291	15	21	259	21	32	293	26	13	72	30	86	25	13	23	116	50	155	32	10	3,495
Whippet			3	3	11	1	4	5	2		27			3	1	10	2		1	3		7	2		186
White	11	4	180	8	469	27	1	222	10	33	250	7	9	1	38	79	8	3	63	55	15	20	8	42	2,561
Willys	1	18	72	3	293	31	20	227	16	6	343	8		17	27	60	5	56	22	27	79	185	13	2	2,788
Willys-Knight			6	1	24	1	1	4	3	1	11	1		1	3	3			1	3		1			157
Miscellaneous	16	5	394	11	890	256	7	511	29	92	528	23	40	12	15	173	31	2	99	249	55	187	11	99	6,464
Totals	648	2038	13051	1560	32792	6821	1436	14207	4060	3099	23396	2027	2959	1673	3286	15742	1591	1339	6823	4640	3552	8399	1174	2202	313,800

New Truck Registrations by Makes and Months for 1928, 1929, 1930, 1931 and 1932

1932 Months	Autocar	Brockway	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	Indiana	International	La France-Republic	Mack	Pierce-Arrow	Reo	Sterling	Stewart	Studebaker	White	Willys-Overland	Miscellaneous	Totals	Months
January	43	77	5317	177	757	71	5119	496	*	1314	40	100	11	354	38	53	160	122	128	390	14767	January
February	62	75	5581	171	621	97	4722	510	*	1271	23	110	17	292	25	86	190	147	115	407	14522	February
March	166	57	6541	185	816	94	4723	541	22	1584	28	142	3	344	36	105	217	567	138	450	16759	March
April	141	106	7058	238	958	149	4466	812	52	1784	26	197	5	356	24	118	301	452	137	397	17777	April
May	81	74	6003	249	1015	142	7067	610	73	1703	15	184	17	357	16	123	276	144	116	423	18688	May
June	99	95	5531	215	882	105	7200	596	115	1522	7	167	4	315	26	87	226	123	99	399	17813	June
July	71	51	4370	192	763	95	5982	599	115	1216	8	106	6	240	17	46	205	118	88	407	14695	July
August	60	49	4908	139	665	79	6282	492	114	1198	7	77	14	211	12	61	235	84	66	257	15010	August
September	58	44	5300	176	657	95	6143	386	133	1243	9	82	4	230	10	57	169	110	54	220	15180	September
October	98	58	5118	199	638	83	6127	491	160	1227	10	107	12	203	10	44	193	71	61	247	15157	October
November	62	71	2486	161	534	76	4747	454	71	895	5	86	10	158	8	49	149	92	56	219	10389	November
†December	68	55	2516	137	417	81	4079	362	69	719	2	63	6	123	5	37	104	108	70	195	9216	December
Yearly totals	1009	812	60729	2239	8723	1167	66657	6349	924	15676	180	1421	109	3183	227	866	2425	2138	1128	4011	179973	Yearly Totals

*Combined with Brockway. †Iowa figures not included in December. Will be published in a forthcoming issue.

1931 Months	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	International	La France Republic	Mack	Pierce-Arrow	Reo	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	Months
January	223	153	7566	167	1178	111	11308	444	1324	21	225		273	62	84	273	38	222	98	21	623	24414	January
February	177	108	7457	135	1129	100	10868	385	1368	33	185		261	47	85	268	23	204	140	21	481	23475	February
March	121	150	9396	144	1359	123	14728	454	1880	36	287		308	57	119	361	37	207	226	20	596	30609	March
April	155	215	11194	236	1574	150	17752	590	2295	52	344		354	104	166	381	22	228	300	24	715	36851	April
May	154	188	9925	260	1491	166	15671	540	2382	39	346		306	101	175	426	16	253	386	19	645	33489	May
June	179	144	8969	239	1284	144	12447	510	2076	45	293		467	59	132	289	17	267	324	10	595	28490	June
July	134	143	9538	304	1249	150	12924	725	2279	58	288	11	648	71	129	301	9	231	333	12	548	30085	July
August	112	186	8951	264	986	125	11573	733	1825	25	287	8	609	58	117	248	9	207	260	8	441	27032	August
September	130	110	8814	229	923	101	10838	642	1866	37	174	12	622	68	109	292	4	236	261	6	493	25967	Sept.
October	157	148	8704	233	988	116	9594	768	1691	39	226	11	578	44	121	308	4	214	227	6	518	24695	October
November	95	70	4833	161	717	105	6155	625	1067	34	145	9	412	46	83	198	2	159	119	3	508	15546	November
December	111	70	4253	111	640	132	4996	503	1020	26	145	6	328	22	74	150	5	133	114	7	301	13147	December
Totals	1748	1685	99600	2483	13518	1523	138854	6919	21073	445	2945	57	5166	739	1394	3495	186	2561	2788	157	6464	313800	Totals

Essex, FWD, Fargo, Paige, Relay and Rugby are now included in the Miscellaneous Column.

1930 Months	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	FWD	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	Months
January	158	247	8759	251	1606	50	*	186	169	13344	731	1837	344	*	23	698	28	33	146	96	100	A241	413	130	62	669	30274	January
February	135	235	10327	207	1267	58	*	152	162	14196	835	1927	298	*	26	565	31	67	74	155	88	220	318	160	44	599	31846	February
March	195	384	13011	264	1595	65	*	156	228	19646	936	2364	452	52	46	682	43	59	106	265	99	223	406	246	86	676	42188	March
April	216	492	14054	300	1682	84	*	153	252	21733	1242	2739	566	73	61	903	35	46	147	314	93	196	480	298	67	767	46997	April
May	212	542	12790	373	1504	59	*	152	213	19742	1191	2531	717	55	93	738	45	55	147	306	112	168	452	216	71	720	45204	May
June	182	479	9762	261	1112	58	*	118	158	15661	889	1915	446	19	44	582	42	52	159	207	101	105	412	200	47	656	33515	June
July	194	396	10949	337	1078	50	*	124	208	19632	881	2471	577	35	41	584	38	70	109	286	88	114	459	215	80	703	39877	July
August	171	251	9548	276	766	35	*	91	142	17078	604	2217	405	29	27	436	40	72	102	184	83	84	395	170	41	620	33609	August
Sept.	170	191	9714	317	1014	43	*	60	155	17524	583	1827	360	29	25	402	45	75	92	172	100	83	317	138	28	529	33902	Sept.
October	188	264	8477	144	1738	37	*	80	174	18151	676	1797	391	29	30	355	45	55	91	177	195	99	321	130	33	579	34224	October
November	119	204	5457	137	1243	34	5	54	143	11470	378	1146	211	25	29	256	24	27	52	100	248	56	225	65	20	295	21998	November
December	71	105	5406	121	1012	29	9	18	89	9037	348	933	176	21	18	228	20	27	58	74	211	36	192	80	18	320	18854	December
Totals	2009	3780	118253	3288	15558	580	18	1204	2099	197216	9004	28703	4943	367	485	6427	433	606	1224	2315	1518	1627	4395	2088	599	7082	410468	Totals

*Included in the Miscellaneous Column, with the exception of FWD, which was not listed.

1929 Months	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	FWD	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	Months
January	128	242	6260	301	2424	*	*	179	203	13441	1197	2186	377	*	51	932	35	102	100	113	121	221	409	*	27	819	26857	January
February	129	246	10290	277	2004	*	*	160	189	13912	1622	1937	396	*	34	830	34	68	87	154	83	277	339	*	35	686	32561	February
March	250	411	16087	372	2632	*	*	344	262	17793	1227	2527	648	*	42	1244	26	71	113	172	199	404	510	*	45	1020	46349	March
April	360	525	18174	347	3056	*	*	230	306	22758	1574	3425	852	*	79	1520	34	101	157	244	147	414	522	*	87	1294	56265	April
May	395	463	15961	350	2843	*	*	272	336	22353	1424	3230	743	*	70	1543	37	122	185	242	149	352	421	*	84	1137	53851	May
June	229	377	13233	308	2414	*	*	287	236	19510	1314	2668	693	*	64	1222	37	93	157	175	153	431	505	*	52	809	45061	June
July	306	511	16051	315	2815	*	*	477	277	24462	1469	3730	692	*	55	1328	34	128	177	254	171	507	564	*	59	1068	57945	July
August	263	438	16649	362	2361	71	*	391	235	25394	1266	3182	643	*	68	1202	33	132	151	250	143	757	563	*	59	920	52523	August
September	289	348	15936	268	2382	71	*	383	259	19423	1503	2733	481	*	46	1030	44	115	96	148	143	734	497	*	35	703	48574	September
October	287	394	15820	295	2642	100	*	353	280	20970	1199	2706	623	*	61	1138	43	114	135	206	123	707	527	*	54	997	49884	October
November	241	303	9570	235	1716	58	*	219	208	15837	786	1628	399	*	39	668	26	71	100	131	98	416	443	*	46	585	33626	November
December	142	214	5381	156	1370	43	*	173	120	11261	636	1340	280	*	33	537	31	66	93	96	106	284	397	*	35	468	25272	December
Totals	2939	4532	160771	3586	28559	363	*	3376	2851	223353	14230	31412	6819	*	662	13212	424	1183	1561	2160	1636	5924	6087	*	588	10610	526766	Totals

*Not in production at that time with the exception of FWD, which was not listed.

1928 Months	Autocar	Brockway-Indiana	Chevrolet	Diam'd-T	Dodge	Essex	FWD	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	Months
January	115	206	6497	159	2998	*	*	*	178	1306	818	1270	363	*	56	838	67	*	56	75	*	*	431	*	*	1069	16423	January
February	78	174	7834	123	2939	*	*	*	211	1345	799	1367	390	*	33	956	55	*	52	94	†	*	382	*	*	895	17913	February
March	189	294	11205	176	3516	*	*	*	228	1965	1310	1664	610	*	44	1382	75	*	73	175	†	*	559	*	*	1272	24757	March
April	234	375	13362	148	3456	*	*	*	273	2366	1754	1977	746	*	52	1742	85	*	107	265	†	*	686	*	*	1658	30426	April
May	265	373	13865	195	2741	*	*	*	372	4679	1866	2439	912	*	77	1888	81	*	123	220	135	*	634	*	*	1569	32434	May
June	217	301	12295	200	2477	*	*	*	278	4837	1699	2216	581	*	60	1648	52	*	82	164	142	249	585	*	37	1034	29155	June
July	238	403	12863	204	3273	*	*	*	324	4984	1957	2841	706	*	44	1606	55	*	88	237	113	259	563	*	74	1221	31853	July
August	193	345	15916	239	3861	*	*	*	259	6372	1881	3158	804	*	57	1544	42	*	112	206	126	348	491	*	47	1016	36807	August
Sept.	183	336	14690	229	3331	*	*	*	271	7141	1633	3070	464	*	49	1395	61	*	98	174	129	283	493	*	57	1038	35125	Sept.
October	255	375	15451	257	3725	*	*	*	334	10912	1706	3020	599	*	61	1557	44	*	84	203	132	375	589	*	58	1120	40857	October
November	216	257	7673	208	2515	*	*	144	224	9758	1175	1849	490	*	52	1003	42	95	100	115	128	242	478	*	38	732	27516	November
December	163	207	2374	180	1746	*	*	99	168	8615	916	1368	425	*	43	766	25	62	70	96	98	136	312	*	37	533	18436	December
Totals	2348	3648	133795	2308	36570	*	*	243	3118	65260	17506	26159	6890	*	630	16325	684	157	1046	1964	997	1892	6260	*	348	13157	341302	Totals

1928—Combined Report: Brockway & Indiana. Auto, Kissel, Selden, Yellow are included in the miscellaneous column. Dodge was Graham at that time. Pierce Arrow was included in the miscellaneous column starting in July. *Not in production at that time with the exception of FWD, which was not listed. †Carried in the miscellaneous column.

Production—Engineering—Factory

Edited by Herbert Chase

INTERNATIONAL OFFERS NEW TWO-TON TRUCK

As a feature of its 1933 line International Harvester is offering a new low-price ($995 list) six-cylinder truck, to be called Model B-4. This powerful chassis is available in three wheelbases, and is adapted to the mounting of many types of bodies. Wheelbases available are 145 inches for dump and semi-trailer service and 170 and 185 inches for general hauling.

The engine, which is of International design and manufacture, has 3 7/16 in. bore, 4 in. stroke and a piston displacement of 222.7 cu. in. It develops 63 brake horsepower at 3,200 r. p. m. Its maximum torque, 154 pound-feet, is developed at 800 r. p. m.

Among the outstanding features of the Model B-4 engine is its 69-pound four-bearing crankshaft of chrome-nickel steel. Removable cylinder liners are readily replaceable. A full pressure oiling system is provided, and a thermostatically-controlled cooling system assures quick warming up and proper temperature control in cold weather. The downdraft carburetor is equipped with a wire wool-type air cleaner.

An 11-inch, single-plate, vibration-dampened clutch and 4-speed transmission are mounted in unit with the engine. All transmission gears are alloy steel forgings, case hardened and ground. Alloy steel case-hardened shafts are mounted on anti-friction bearings. Transmission reductions are: low, 6.4 to 1; second, 3.09 to 1; third, 1.69 to 1; high, 1 to 1; reverse, 7.82 to 1.

A three-point power plant mounting is used. The front support is cushioned by rubber and two helical springs which permit the flexibility required. Rear supports are cushioned on rubber pads.

Pressed steel frame side rails are tapered at front and rear ends to reduce platform height.

The front axle is a heavy I-beam forging and has heat-treated alloy steel knuckles. A cam and lever steering gear is used.

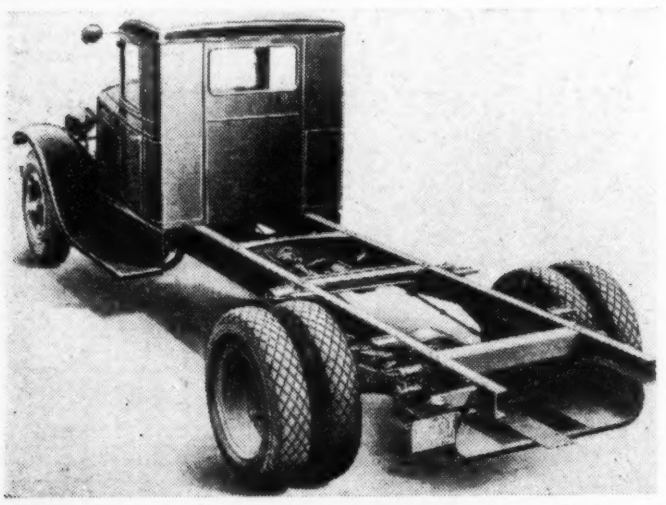
In the rear axle a heavy, rigid, banjo-type, malleable-iron housing is used. The spiral-bevel pinion and driven gear, as well as the differential gears, are of alloy steel, the pinion being straddle-mounted on ball bearings to avoid unnecessary noise and assure long gear life. A four-pinion differential is mounted on tapered roller bearings. Shafts are of chrome-molybdenum steel. Axle reductions available are 5.625 to 1 and 6.5 to 1.

All springs are semi-elliptic type. Auxiliary rear springs are provided for heavy loads.. Foot brakes are of the mechanically-operated two-shoe, internal-expanding, self-energizing type. The emergency brake is an external contracting type mounted on the propeller shaft directly behind the transmission.

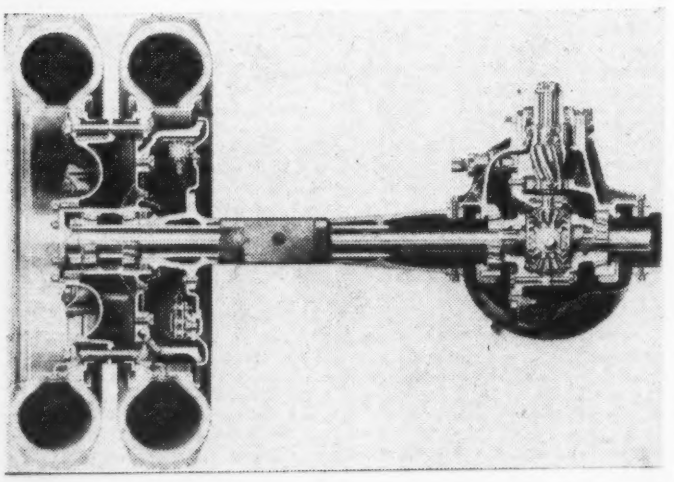
Universal joints are of the needle-bearing, anti-friction type. The 145-inch wheelbase chassis is equipped with a one-piece propeller shaft and two universal joints, and longer wheelbase jobs have an intermediate shaft and three universal joints. A fully enclosed ball bearing in a self-aligning housing supports the rear end of this intermediate shaft.

Spoked cast wheels with integral hubs are provided. Standard tires are 6.50-20 balloons front and 6.50-20 dual balloons rear. Oversize pneumatic and balloon tires are available at additional cost. Standard chassis equipment includes cowl and dash, front fenders and short running boards, front bumper, spare rims, license brackets, starter, battery,

(Continued on Page 12)

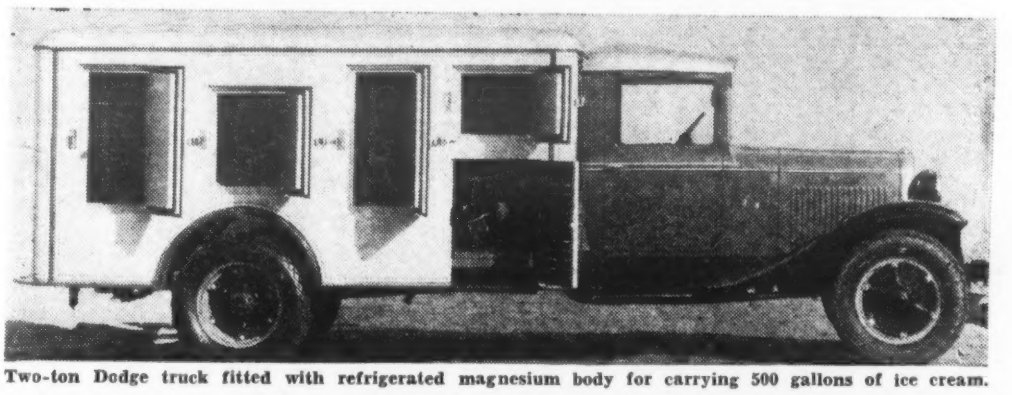


INTERNATIONAL HARVESTER Model B-4 two-ton truck



SECTIONAL VIEW of the new two-ton rear axle, with straddle-mounted pinion, used in the Model B-4 International truck

Magnesium Body for Ice Cream Truck



Two-ton Dodge truck fitted with refrigerated magnesium body for carrying 500 gallons of ice cream.

A transportation unit of decided novelty in the dairy and ice cream industries was shown for the first time at the Michigan Allied Dairies show, held recently at Grand Rapids, Mich. As shown in the illustration, the vehicle is a mechanically refrigerated ice cream carrier built on a standard 2-ton Dodge truck chassis.

The refrigerator body was designed and built by Proctor-Keefe Company, Detroit, specialists in the construction of dairy-products transportation. In the body construction Dowmetal, a magnesium alloy heretofore employed chiefly in the aviation industry, is used. Though weighing only two-thirds as much as aluminum, it has high strength, toughness and fatigue endurance.

By the use of Dowmetal, body weight is reduced to barely 2,000 pounds. Besides the self-contained mechanical refrigeration unit, there is room for 500 gallons of ice cream. This represents a pay load which, with conventional body construction, it is claimed, would require a body weighing approximately 4,700 pounds and hence a 3 to 3½-ton chassis. This high payload capacity, together with the Dodge 2-ton chassis, not only makes for low purchase cost and economical operation and maintenance, but reduces license fees and meets in an effective manner the weight restrictions imposed by some states.

The refrigerator mechanism, actuated by a small gasoline engine, is housed in the lower forward section provided with ventilating louvres, leaving four compartments for the accommodation of ice cream.

CONTINENTAL MOTORS PROMOTES J. C. REESE

Grand Rapids, Mich., Feb. 16.—L. C. Curl, assistant secretary of Continental Motors Corporation and director of purchases for all Continental subsidiaries, has announced the appointment of John C. Reese as purchasing agent for the corporation and its subsidiaries.

Reese has been purchasing agent for the automobile division of the corporation since its formation and was formerly with the Durant Motor Corporation in the same capacity.

At the same time announcement was made of the appointment of George E. Winters, traffic manager of Continental Motors Corporation, to a similar position for all subsidiaries. Both men will function in their respective capacities for the Continental Automobile Company, Continental-Divco Company and the Continental Aircraft Company, as well as for Continental Motors Corporation.

Tropic-Aire Announces New Radio Line

Three new automobile radio models are being introduced to the trade by Tropic-Aire, Inc., manufacturers of hot-water heaters for motor vehicles. Production is being rushed as rapidly as possible, and first deliveries will be made on or about March 1.

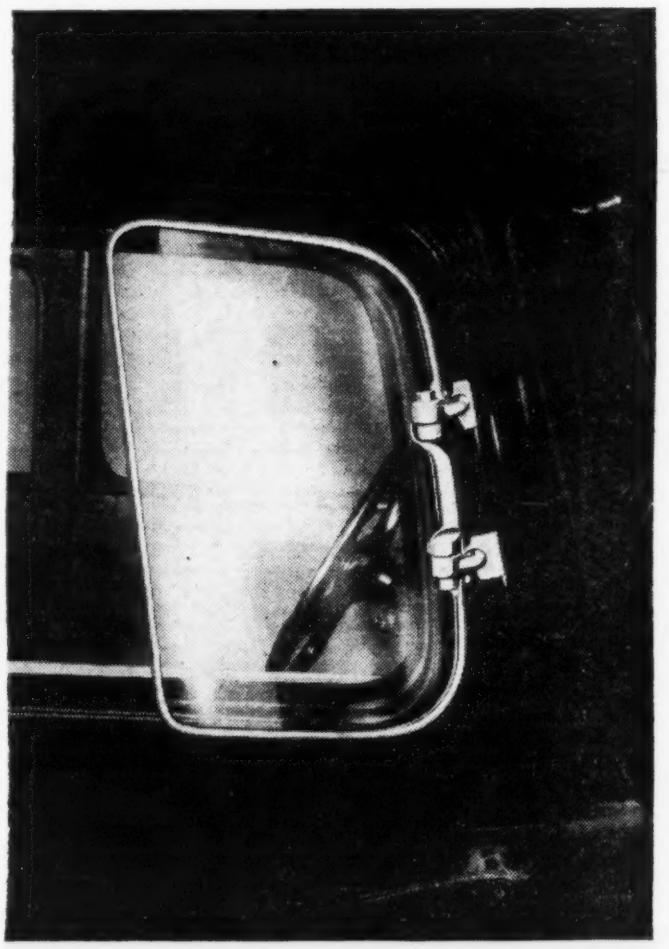
The three models are described as follows: All models are all-electric, six-tube superheterodyne types. The Universal model is a one-piece unit listing at $44. The Junior model is a two-piece unit with "B" battery eliminator embodyied in the speaker. It lists at $59.50. The model known as the Senior is a three-piece unit with "B" battery eliminator embodied in the speaker and remote control mounted on steering column. It lists at $74.95.

Distribution will be secured through regular automotive and radio jobbers, who will be protected by exclusive franchises. It is expected that in many points the Tropic-Aire heater jobber will handle the new radio line.

ORDER GIANT ROLLING MILL

Salem, O., Feb. 16.—The American Sheet & Tin Plate Company, a subsidiary of the United States Steel Corporation, has placed an order with the E. W. Bliss Company for what is declared to be the world's largest cold rolling mill, for installation in the Gary, Ind., plant of the Steel subsidiary. The mill will cost $500,000 and will be of a special type designed to roll strips and sheets up to 72 inches in width.

Develop New Ventilator Wing



To meet a growing demand for wing ventilators, a new K-type wing has been developed by American Injector Company, Detroit. This improved type of wind deflector will be sold through dealers handling all makes of cars.

This wing is designed for mounting outside the car on the front door and does not interfere with the raising and lowering of the window. In no position does it extend inside the car. It is claimed that it deflects into the car only air that is free of dirt, dust, rain or snow. It operates independently of the window and can be adjusted to any position regardless of the position of the window.

Five sizes are said to fit 95 per cent. of all the 1933 cars, and a few other sizes will fit all 1931 and 1932 models. It is claimed that the device can be installed on any car in a few minutes. The price is $10 per set with plate glass; $12.50 with shatterproof glass.

BRAKE ASSOCIATION DISSOLVES

Philadelphia, Feb. 16.—The Brake Association of Philadelphia, which had been in existence for several years, and which was composed of twelve of the leading automobile brake specialists, has been dissolved because of lack of interest, owing to prevailing conditions in the industry, according to members.

Major Specifications and Mechanical Details of 1933 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H. P.	Max. Brake H. P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Make Transmission	No. Spds. For.	Rear Axle Make	Type Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wgt.	Standard Tire Sizes Front	Standard Tire Sizes Rear
Austin	400	225	Own	L	4	2.2x3	45.6	7.8	13@3200	G	Hex	Rock	Spic	Own	Tll	Gra	Aut	W-G	3	Sal	Sp	5.25	O4M	76.5	75	——	18x3.75	18x3.7b
Autocar E	1½	2250	Own	L	6	3¾x4¾	314.0	32.7	75@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Br-L	4	Own	Sp	33.5	LO4IHM	380	159	5370	20x7.00	20x7.00D
Autocar RE	2	2300	Own	L	6	3¾x4¾	314.0	32.7	75@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Br-L	4	Own	Sp	33.5	LO4IHM	380	159	5400	20x7.50	20x7.50D
Autocar RF	3	2450	Own	L	6	3¾x4¾	314.0	32.7	75@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Own	4	Own	Sp	33.0	LO4IHM	380	159	5630	20x8.25	20x8.25D
Autocar RG	2½	2600	Own	L	6	3¾x4¾	314.0	32.7	75@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Own	4	Own	2R	39.3	LO4IHM	460	159	5880	34x7	34x7D
Autocar A	2½	3000	Own	L	6	4 x4¾	358.0	38.4	84@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	Sp	33.0	LO4IV	460	150	6350	20x8.25	20x8.25D
Autocar D	3	3500	Own	L	6	4 x4¾	358.0	38.4	84@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	39.3	LO4IV	460	150	6375	34x7	34x7D
Autocar DE	3½	3850	Own	L	6	4 x4¾	358.0	38.4	84@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	40.7	LO4IV	519	150	6890	20x9.00	20x9.00D
Autocar DF	3½	3950	Own	L	6	4 x4¾	358.0	38.4	84@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	40.7	LO4IV	519	150	7220	20x9.00	20x9.00D
Autocar DH	4	4150	Own	L	6	4 x4¾	358.0	38.4	84@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	54.3	LO4IV	519	150	7450	36x8	36x8D
Autocar N	4	4600	Own	L	6	4¼x4¾	404.0	43.4	94@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	45.6	LO4IV	519	191½	7990	20x9.75	20x9.75D
Autocar NE	5	4725	Own	L	6	4¼x4¾	404.0	43.4	94@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	5	Own	2R	50.1	LO4IV	519	149	8300	22x9.75	22x9.75D
Autocar NF	5	4800	Own	L	6	4¼x4¾	404.0	43.4	94@2500	G	G & O	Long	Spic	Ross	Str	P	DR	Own	5	Own	2R	43.1	LO4IV	519	191½	8350	22x9.75	22x9.75D
Autocar NH	5	4925	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Own	5	Own	2R	50.1	LO4IV	519	149	8350	22x9.75	22x9.75D
Autocar S	6	5500	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	54.0	LO4IV	544	158	8700	22x9.75	22x9.75D
Autocar SE	6	5800	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Own	4	Own	2R	54.0	LO4IV	544	158	8850	22x10.50	22x10.50D
Autocar CE	7½	6000	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Br-L	12	Wis	2R	120.5	LO4IV	664	158	10950	24x10.50	24x10.50D
Autocar C	7½	6600	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	LN	Own	4	Own	2R	44.1	BO4IM	596	203	10410	20x10.50	20x10.50D
Autocar CBS	7½	6600	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Br-L	12	Wis	2R	120.5	LO4IV	664	164	11280	24x10.50	24x10.50D
Autocar CF	7½	6900	Wak	L	6	5 x5¾	677.0	60.0	126@1800	G	Own	Br-L	Spic	Ross	Str	P	DR	Own	12	Own	2R	88.5	O4IA	544	192	9700	22x10.50	22x10.50D
Autocar T	7½	6000	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Long	Spic	Ross	Str	P	DR	Br-L	12	Own	2R	87.6	O4IA	660	192	10700	24x10.50	24x10.50D
Autocar TE	8½	6500	Own	L	6	4½x4¾	453.0	48.6	101@2400	G	G & O	Br-L	Spic	Ross	Str	P	DR	Br-L	12	Own	2R	87.6	O4IA	660	195	10950	24x10.50	24x10.50D
Autocar TF	8½	6800	Wak	L	6	5 x5¾	677.0	60.0	126@1800	G	G & O	Br-L	Spic	Ross	Zen	P	NE	Br-L	12	Wis	2R	96.0	T4IA	664	180	12300	24x10.50	24x10.50D
*Autocar FE	20	9500	Ste	L	6	5½x6	780.0	66.2	156@1800	G	G & O	Br-L	Spic	Ross	Zen	P	NE	Br-L	12	Tim	Wo	99.6	T6IA	716	198	16300	22x9.75	22x9.75D
**Autocar 6GE	15	11000	Ste	L	6	5½x6	780.0	66.2	156@1800	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2R	54.3	O2IM	516	114	7600	40x8	40x8D
***Autocar HS	3½	4600	Own	L	4	4½x5½	350.0	32.4	45@1450	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2R	54.3	O2IM	516	114	7900	40x8	40x8D
***Autocar SHS	3½	4800	Own	L	6	4¼x4¾	404.0	43.4	94@2500	G	Own	Long	Spic	Ross	Str	Gra	DR	Own	4	Own	2R	54.3	O2IM	516	114	7900	40x8	40x8D
Brockway 80 C	*9300	1215	Con	L	6	3⅞x4	214.7	27.3	71@3200	C	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	36.2	CB4IM	248	149	4075	20x6.00	20x6.00D
Brockway 90 C	*12500	1525	Con	L	6	3⅜x4⅝	248.2	27.3	70@3200	C	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	37.4	L4IH	353	149	4355	20x6.50	20x6.50D
Brockway 92 C	*12500	1800	Con	L	6	3⅜x4⅝	248.2	27.3	70@3200	C	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Tim	Sp	37.4	L4IH	353	149	4450	32x6	32x6D
Brockway 120 C	*15000	1990	Con	H	6	4 x4½	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Tim	Sp	38.5	L4IH	353	156	5500	32x6	32x6D
Brockway 140 C	*17500	2495	Con	H	6	4 x4½	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2R	43.5	L4IHV	386	156	6100	32x6	32x6D
Brockway 141 C	*19500	2935	Con	H	6	4 x4½	311.0	38.4	73@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2R	46.2	L4IHV	380	170	6500	32x6	32x6D
Brockway 170 C	*19500	2160	Con	H	6	4½x4¾	380.9	40.8	89@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2R	46.6	L4IHV	380	170	7100	32x6	32x6D
Brockway 175 C	*19500	3660	Con	H	6	4¾x4¾	427.5	45.9	100@2400	C	G & O	Ful	Spic	Ross	Zen	P	*Aut	Ful	5	Wis	2R	46.6	L4IHV	380	170	7200	34x7	34x7D
Brockway 195 C	*24000	3820	Con	H	6	4½x4¾	380.9	40.8	89@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2R	52.4	L4IHV	471	170	8100	34x7	34x7D
Brockway 220 C	*28000	4560	Con	H	6	4¾x4¾	427.5	45.9	100@2400	C	G & O	Br-L	Spic	Ross	Zen	P	*Aut	Br-L	4	Wis	2R	50.7	L4IHV	546	170	8675	36x8	36x8D
Brockway 260 C	*30000	5850	Con	H	6	4½x5¼	501.0	48.6	120@2200	C	G & O	Ful	Spic	Ross	Zen	P	*Aut	Ful	4	Wis	2R	53.7	L4IHV	546	212	9000	22x10.50	22x10 50D
Chevrolet	½	330	Own	H	6	3½x4	206.8	26.3	56@2750	G	Har	Own	Own	Own	Car	P	DR	Own	4	Own	Sp	13.6	O41M	101	109	1880	18x5.25	18x5.25
Chevrolet	1½	480	Own	H	6	3½x4	206.8	26.3	56@2750	G	Har	Own	Own	Own	Car	P	DR	Own	4	Own	Sp	33.4	O41M	—	131	2830	30x5	32x6
Chevrolet	1½	510	Own	H	6	3½x4	206.8	26.3	56@2750	G	Har	Own	Own	Own	Car	P	DR	Own	4	Own	Sp	33.4	O41M	170	157	2915	30x5	32x6
Diamond T 210 S F	1½	545	Her	L	6	3⅜x4¼	228.0	27.3	60@2800	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	—	L4IH	191	135½	3100	20x5.50B	20x6.50B
Diamond T 210 FF	1½	565	Her	L	6	3⅜x4¼	228.0	27.3	60@2800	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	—	L4IH	191	135½	3100	20x5.50B	20x6.50B
Diamond T 240 A	1¾	795	Her	L	6	3⅜x4¼	228.0	27.3	60@2800	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	—	L4IH	220	137	3500	20x6.00B	32x6P
Diamond T 310	2	995	Her	L	6	3⅜x4¼	263.0	31.5	68@2800	G	G & O	Borg	Spic	Ross	Zen	P	Aut	W-G	4	Cla	Sp	—	L4IH	350	155	4200	20x6.50B	20x6.50DB
Diamond T 350	2½	1295	Her	L	6	3⅜x4¼	282.0	33.7	73@2800	G	G & O	Borg	Spic	Ross	Zen	P	Aut	Cla	5	Cla	Sp	—	L4IH	350	155	4700	20x7.00B	20x7.00DB
Diamond T 410A	3	1695	Her	L	6	4 x4½	339.0	38.4	100@2800	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Cla	Sp	—	L41HV-T	350	160¾	5400	20x7.50B	20x7.50DB
Diamond T 410B	3	2135	Her	L	6	4 x4½	339.0	38.4	100@2800	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	4	Cla	Sp	—	L41HV-T	350	200	6100	20x7.50B	20x7.50DB
Diamond T 504 A	3	2650	Her	L	6	4 x4½	339.0	38.4	100@2800	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Wis	2 R	—	L41HV-T	410	176½	6400	20x8.25B	20x8.25DB
Diamond T 506 A	3	2950	Her	L	6	4½x4½	428.4	43.3	91@2200	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	5	Wis	2 R	—	L41HV-T	410	184	6400	20x8.25B	20x8.25DB
Diamond T 603	3-4	3395	Her	L	6	4¾x4¾	428.4	45.9	94@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	5	Wis	2 R	—	L41HV-T	499	169	7500	20x9.00B	20x9.00DB
Diamond T 606 B	3-4	3695	Her	L	6	4½x5¼	501.0	48.6	111@2200	G	G & O	Cov	Spic	Ross	Zen	P	L-N	Cov	5	Wis	2 R	—	L41HV-T	499	187½	7500	20x9.00B	20x9.00DB
Diamond T 510	4	1995	Her	L	6	4 x4½	339.0	38.4	100@2800	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	4	Tim	Sp	—	L41HV-T	408	168	6000	20x7.00B	20x8.25DB
*Diamond T 801	4	4140	Her	L	6	4¾x4¾	428.4	45.9	94@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Br-L	7	Own	Wo	—	L61HV-T	571	189½	8300	36x8P	36x8P
Diamond T 750	4-5	4925	Her	L	6	4⅝x5¼	529.0	51.4	114@2200	G	G & O	Cov	Spic	Ross	Zen	P	Aut	Cov	5	Wis	2 R	—	W41A-T	552	178	9300	22x9.75B	22x9.75DB
*Diamond T 1201	6	5600	Her	L	6	4½x5¼	501.0	48.6	111@2200	G	G & O	Cov	SpicBlo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	—	W41A-T	238	190	11000	34x7P	34x7DP
*Diamond T 1602	8	6400	Her	L	6	4⅝x5¼	529.0	51.4	114@2200	G	G & O	Cov	SpicBlo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	—	W41A-T	238	190	11700	36x8P	36x8DP
*Diamond T 1603	8	7500	Wak	L	6	5 x5¾	677.4	60.0	127@2200	G	G & O	Br-L	SpicBlo	Ross	Zen	P	Aut	Br-L	7	Tim	Wo	—	W41A-T	238	194	12500	36x8P	36x8DP
Dodge Bros. UF 10	½	375	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Un	Own	Car	P	DR	Own	3	Own	Sp	12.8	O41H	121	109	1925	19x5.00	19x5.00
Dodge Bros. F 10	½	445	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Un	Own	Car	P	DR	Own	4	Own	Sp	12.8	O41H	121	109	1975	19x5.25	19x5.25
Dodge Bros. G 20	¾-1	597	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	175.8	131	2520	17x7.50	17x7.50
Dodge Bros. G 21	¾-1	622	Own	L	6	3¼x4¼	211.5	25.3	66@3200	C	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	175.8	157	2670	17x7.50	17x7.50
Dodge Bros. UG 20	¾-1	537	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	175.8	131	2450	17x7.50	17x7.50
Dodge Bros. UG 21	¾-1	562	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	175.8	157	2600	17x7.50	17x7.50
Dodge Bros. HC	—	340	Own	L	6	3¼x4½	189.8	23.4	70@3600	G	—	Borg	Own	Own	B&B	—	DR	Own	3	Own	Sp	12.2	41H	106.1	111¼	1775	17x5.25	17x5.25
Dodge Bros G 22	¾-1	759	Own	L	6	3¼x4½	217.7	25.3	—	G	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136	3080	——	——
Dodge Bros. UG 30	1½	525	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	176	131	2490	20x6.00	32x6
Dodge Bros. UG 31	1½	550	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	176	157	2640	20x6.00	36x6
Dodge Bros. G 30	1½	585	Own	L	6	3¼x4⅜	201.3	23.5	60@3100	C	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	176	131	2560	20x6.00	32x6
Dodge Bros. G 31	1½	610	Own	L	6	3¼x4⅜	201.3	23.5	60@3100	C	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O41H	176	157	2710	20x6.00	32x6
†Dodge Bros. UGS 50	1½	675	Own	L	4	3⅝x4¾	196.0	21.0	48@2800	G	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O61HV	273	153	3575	20x6.00	32x6S
†Dodge Bros. GS 50	1½	935	Own	L	6	3¼x4¼	211.5	25.3	60@3100	C	Fed	Borg	Cle	Own	Car	P	DR	Own	4	Own	Sp	36.1	O61HV	273	153	3650	20x6.00	32x6S
Dodge Bros. F 36	1½	1485	Own	L	6	3⅜x3⅞	208.0	27.3	63@3200	C	Fed	Borg	Cle	Han	Zen	P	DR	Own	4	Own	Sp	41.4	O41H	305	165	3972	20x6.00	20x6.00D
Dodge Bros. G 43	2	795	Own	L	6	3¼x4⅜	217.7	25.3	73@3200	C	Fed	Borg	Cle	Own	Car	P	DR	Own	5	Own	Sp	31.5	O41H	229	136	3345	20x7.00	20x7.00D
Dodge Bros. G 44	2	825	Own	L	6	3¼x4⅜	217.7	25.3	73@3200	C	Fed	Borg	Cle	Own	Car	P	DR	Own	5	Own	Sp	50.0	O41H	229	165	3475	20x7.00	20x7.00D
*Dodge Bros. F 40	2	1995	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	43.7	O41H	350	150	5173	20x6.50	20x6.50D
*Dodge Bros. F 41	2	2085	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	43.7	O41H	350	165	5211	20x6.50	20x6.50D
Dodge Bros. F 42	2	2180	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	43.7	O41H	350	190	5311	20x6.50	20x6.50D
†Dodge Bros. GS 55	2	1260	Own	L	6	3¼x4⅜	217.7	25.3	73@3200	C	Fed	Borg	Cle	Own	Car	P	NE	Own	4	Own	Sp	50.0	O61HV	365	158	4450	20x7.00	20x7.00D
Dodge Bros. F 60	3	2645	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	2 R	56.0	O41H	416	146	5543	32x6	32x6D
*Dodge Bros. F 61	3	2575	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	48.8	O41H	416	170	5789	32x6	32x6D
*Dodge Bros. F 62	3	2695	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	Long	Borg	Cle	Sag	DL	P	DR	Own	4	Own	Sp	48.8	O41H	416	195	5901	32x6	32x6D
Dodge Bros FS 75	3	3995	Own	L	6	3⅝x5	309.6	31.5	96@3000	G	—	Borg	Own	Own	DL	—	DR	Own	4	Own	Sp	48.8	41H-V	657.1	221	8350	20x9.00	20x9.00
Dodge Bros. G 80	4	5250	Own	L	8	3½x5	384.8	39.2	115@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	62.7	B41A-T	650	146	7640	20x9.75	20x9.75D
Dodge Bros. G 81	4	5285	Own	L	8	3½x5	384.8	39.2	115@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B41A-T	650	170	7840	20x9.75	20x9.75D
Dodge Bros. G 82	4	5350	Own	L	8	3½x5	384.8	39.2	115@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B41A-T	650	195	8040	20x9.75	20x9.75D
Dodge Bros. G 83	4	5415	Own	L	8	3½x5	384.8	39.2	115@3000	G	Long	Borg	Cle	Sag	Str	P	DR	Own	5	Own	Sp	69.6	B41A-T	650	220	8400	20x9.75	20x9.75D
Essex Ter. 6	——	330	Own	L	6	2½x4¾	193.0	20.7	70@3200	—	—	—	—	——	—	P	—	Own	3	Own	—	—	4M	—	106	——	17x5.25	17x5.25
Federal D 3	*1½	670	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L4IH	191	130	3225	20x6.00	32x6
Federal E 3	*1½	695	Con	L	6	3⅜x4	215.0	27.3	72@3400	C	Long	Borg	Pet	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L4IH	191	130	3225	20x6.00	32x6
Federal F 7	*1¾	1325	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Gem	Zen	P	DR	Own	4	Tim	Sp	29.2	L4IH	247	132	3765	30x5	30x5D
Federal F 8	*2	1425	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Gem	Zen	P	DR	Own	4	Tim	Sp	34.0	L4IH	269	132	3865	30x5	30x5D
Federal G 5	*2	995	Con	L	6	3⅜x4	215.0	27.0	72@3400	C	Long	Borg	Cle	Gem	Zen	P	DR	Own	4	Tim	Sp	34.0	L4IH	269	132	3800	20x6.50B	20x6.50DB
Federal A 6	*2	1695	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Cla	Sp	38.5	L4IH	270	151	4580	32x6	32x6D
Federal A 6 T	*2½	1995	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Sp	47.1	L4IHV	379	151	5110	32x6	32x6D
Federal A 6 T W	*2½	2130	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Sp	52.9	L4IHV	379	151	5110	32x6	32x6D
Federal T 3 W	*2½	1595	Wak	L	4	4 x5	251.0	25.6	56@2000	G	Long	Borg	Cle	Ross	Zen	P	DR	Own	4	Tim	Wo	36.3	L4IH	337	148	5110	36x8	36x8
Federal A 600	*2½-3	1745	Con	L	6	3¼x4½	288.3	32.6	73@2600	C	Long	Borg	Cle	Ross	Zen	Vac	DR	Own	4	Tim	Sp	41.5	L4IH	370	157	6050	20x7.50	20x7.50D
Federal T 3 W F A	*2½-3	1795	Wak	L	4	4 x5	251.0	25.6	56@2000	G	Long	Borg	Cle	Ross	Zen	Vac	DR	Own	4	Tim	Wo	42.9	L4IHV	379	148	5400	32x6	32x6D
†Federal D 28 W	*3	1050	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	312	140	3925	20x6.00	32x6
†Federal E 2 S W	*3	1150	Con	L	6	3⅜x4	215.0	27.3	60@2600	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	312	145	3975	20x6.00	32x6
Federal D 2 D	*3	1350	Con	L	4	3⅞x4¼	200.5	24.0	50@2700	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	312	140	4235	20x6.00	32x6
Federal E 2 D	*3	1450	Con	L	6	3⅜x4	215.0	27.3	60@2600	C	Long	Borg	Cle	Gem	Zen	P	DR	W-G	4	Cla	Sp	40.8	L6IH	312	145	4310	20x6.00	32x6
Federal A 600 T	*3-3½	2045	Con	L	6	3¼x4½	288.3	32.6	73@2600	C	Long	Borg	Cle	Ross	Zen	P	DR	Own	4	Tim	Sp	50.7	L4IHV	379	157	6100	20x8.25	20x8.25D
Federal A 600 T W	*3-3½	2180	Con	L	6	3¼x4½	288.3	32.6	73@2600	C	Long	Borg	Cle	Ross	Zen	P	DR	Own	4	Tim	Wo	48.8	L4IHV	379	157	6100	20x8.25	20x8.25D
Federal A 600 T D R	*3-3½	2180	Con	L	6	3¼x4½	288.3	32.6	73@2600	C	Long	Borg	Cle	Ross	Zen	P	DR	Own	4	Tim	2R	51.3	L4IHV	379	157	6100	20x8.25	20x8.25D
Federal T 10 B	*3½-4	2550	Con	H	6	4 x4¼	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Sp	44.5	L4IHV	379	165	6550	34x7	34x7D
Federal T 10 W	*3½-4	2685	Con	H	6	4 x4¼	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	Wo	44.0	L4IHV	379	165	6550	34x7	34x7D
Federal T 10 D R	*3½-4	2685	Con	H	6	4 x4¼	311.0	38.4	75@2200	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Tim	2R	45.3	L4IHV	379	165	6550	34x7	34x7D
†Federal A 6 S W	*4	2195	Con	L	6	3⅜x4⅝	248.0	27.3	64@2600	C	Long	Borg	Pet	Ross	Zen	P	DR	Own	4	Cla	Sp	38.5	L6IHV	465	164	5620	32x6	32x6D
Federal U 6	*4½-5	3860	Con	H	6	4½x4¾	381.0	40.8	85@2200	C	Long	Borg	Spic	Ross	Zen	P	DR	Cla	5	Tim	Wo	50.4	L4IHV	465	165	7420	36x8	36x8D
Federal U 6 D R	*4½-5	3860	Con	H	6	4½x4¾	381.0	40.8	85@2200	C	Long	Borg	Spic	Ross	Zen	P	DR	Cla	5	Tim	2R	47.6	L4IHV	465	165	7420	36x8	36x8D
†Federal A 600 S W	*4½-5	2395	Con	L	6	3⅞x4½

Major Specifications and Mechanical Details of 1933 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

(Continued from Page 10)

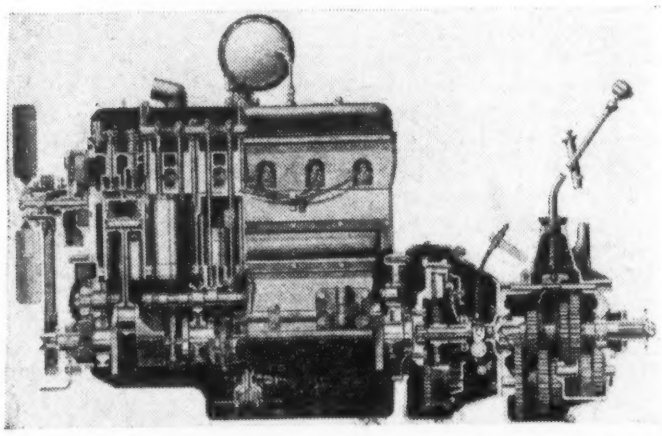
Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H P.	Max. Brake H. P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Make Transmission	No. Spds. For.	Rear Axle Make	Type Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wgt.	Tire Sizes Standard Front	Tire Sizes Standard Rear
†Gramm C X s	2	1095	Con	L	4	4½x4¼	227.0	27.2	55@2600	G	Per	Jon	Blo	Ross	Til	P	Aut	W-G	4	Tim	Sp	37.0	L4IH	452	131	3900	20x6.50	20x6.50D
Gramm C X 6	2	1295	Con	L	6	3⅝x4½	248.2	27.3	70@3000	G	Per	Own	Blo	Ross	Til	P	Aut	W-G	4	Tim	Sp	37.0	L4IH	453	131	4150	20x6.50	20x6.50D
Gramm C	2	1795	Lyc	L	6	3⅝x4½	278.6	31.5	82@2600	G	Per	Own	Blo	Ross	Zen	P	Aut	Cov	4	Tim	Sp	31.0	L4IH	353	131	4800	20x7.00	20x7.00D
Gramm C F	2½	1895	Lyc	L	6	3¾x4½	299.0	33.7	85@2800	G	Per	Br-L	Blo	Ross	Til	P	Aut	Br-L	4	Tim	Sp	38.2	L4IH	353	160	4900	20x7.50	20x7.50D
Gramm D	2½	1995	Lyc	L	6	3¾x4½	299.0	33.7	90@2200	G	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Tim	Sp	33.0	L4IHV	339	160	5200	20x7.50	20x7.50D
Gramm CXH	2-3	1345	Her	L	6	3¾x4¼	282.0	33.7	73@3000	G	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Tim	Sp	37.0	L4IH	353	131	4300	20x6.50	20x6.50D
Gramm E	3	2595	Lyc	L	6	3½x5	353.8	36.0	90@2200	G	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Tim	Sp	35.0	L4IHV	374	160	5950	20x8.25	20x8.25D
Gramm E Y	3	3595	Con	H	6	4½x4¾	380.8	40.8	90@2200	G	Per	Ful	Blo	Ross	Zen	P	Aut	Br-L	4	Tim	Sp	39.0	L4IHA	—	190	7200	20x7.50	20x7.50D
Gramm EX	3-4	2295	Con	L	6	3½x4½	318.0	36.0	80@2700	—	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Tim	Sp	35.0	L4IHV	339	160	5200	20x8.25	20x8.25D
Gramm ED	3-4½	3895	Cum-D	H	4	4½x6	448.0	38.0	85@1800	G	Per	Br-L	Blo	Ross	Zen	P	L-N	Br-L	4	Tim	Sp	39.0	L4IHV	374	160	5600	20x8.25	20x8.25D
Gramm G	4	3695	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Wis	2R	49.5	L4IHV	768	165	8200	20x9.00	20x9.00D
Gramm G S	4	3695	Lyc	L	8	3¾x4¾	419.6	44.4	130@2700	G	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Wis	2R	—	L4IHV	768	165	8200	20x9.00	20x9.00D
Gramm G Y	4	4345	Con	H	6	4⅜x4¾	428.4	45.9	100@2200	C	Per	Ful	Blo	Ross	Zen	P	Aut	Cov	4	Wis	2R	28.0	BW4IM	736	210	7700	20x8.25	20x8.25D
Gramm G W	5	5175	Con	H	6	4⅜x4¾	428.0	45.9	100@2200	C	Per	Br-L	Blo	Ross	Zen	P	Aut	Br-L	4	Wis	2R	—	41A	864	157	9500	20x9.00	20x9.00D
Gramm GWD	5	6495	Cum-D	H	6	4½x6	672.0	57.0	125@1800	G	Per	Br-L	Blo	Ross	——	P	L-N	Bl	4	Wis	2R	25.5	41A	864	157	9600	20x9.00	20x9.00D
Gramm H Y	5	6545	Con	L	6	4¾x5¾	611.4	54.1	127@2300	G	Per	Ful	Blo	Ross	Zen	P	Aut	Ful	4	Wis	2R	25.2	41A	996	236	10100	20x9.00	20x9.00D
Indiana 85	1½	885	Her	L	6	3⅝x4¼	263.0	31.5	68@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Sp	35.1	L4IH	249	141	3900	20x6.50	20x6.50D
Indiana 85 DR	1½	1190	Her	L	6	3⅝x4¼	263.0	31.5	68@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	5	Wis	2R	40.1	L4IH	316	141	4200	20x6.50	20x6.50D
Indiana 95	2	1095	Her	L	6	3¾x4¼	282.0	33.7	73@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Sp	36.2	L4IH	353	141	4400	32x6	32x6DP
Indiana 95 DR	2½	1275	Her	L	6	3¾x4¼	282.0	33.7	73@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	41.2	L4IH	353	141	4650	20x7.50	20x7.50DB
Indiana 17	2½	2450	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Sp	37.8	L4IHV	398	170	7000	20x8.25	20x8.25D
Indiana 106 DR	3½	1850	Her	L	6	4 x4½	339.0	38.4	76@2400	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	40.3	L4IHV	353	156	6000	20x7.50	20x7.50D
*Indiana 95 SBT 151	3	1675	Her	L	6	3¾x4¼	282.0	33.7	73@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Sp	45.8	L6HIV	559	168	6500	32x6	32x6DP
*Indiana 95 SW 75	3	1735	Her	L	6	3¾x4¼	282.0	33.7	73@2800	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Wo	45.8	L6HIV	459	186	6200	32x6	32x6DP
Indiana 17 DR	3	2675	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	38.6	L4IHV	398	170	7300	20x8.25	20x8.25D
Indiana 106 SW 151	3	2675	Her	L	6	4 x4½	339.0	38.4	76@2400	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Wo	42.6	L6IHV	559	188	7500	32x6.00P	32x6DP
Indiana 19 DR	3½	3400	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	52.3	L4IHV	489	170	8100	20x9.00	20x9.00D
Indiana 17 SBT 251	4	3250	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Sp	37 8	L6HIV	625	188	8200	34x7	34x7D
*Indiana 17 SW 251	4	3475	Her	L	6	4⅜x4¾	428.4	45.9	94@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Tim	Wo	38.1	L6HIV	625	188	8500	34x7	34x7D
Indiana 43 DR	4	4300	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	50.7	L4IHV	546	170	8500	20x9.75	20x9.75D
Indiana 45 DR	5	4800	Her	L	6	4⅝x5¼	529.0	51.3	115@2200	G	Yo	Br-L	Spic	Ross	Str	P	Aut	Br-L	4	Wis	2R	45.4	L4IHV	546	170	8700	20x9.75	20x9.75D
Indiana 47 DR	5-7	——	Own	H	6	4¼x6	672.0	—	125@1800	G	Yo	Br-L	Spic	Ross	——	P	L-N	Br-L	5	Wis	2R	45.4	W4IA	560	170	10500	20x10.50	20x10.50D
International D 1	½	360	Own	L	6	3⅛x4⅛	213.3	26.3	70@3400	G	Mod	Own	Spic	Own	Til	P	Aut	Own	3	Own	Sp	12.8	B4IM	156	113	1950	18x5.25	18x5.25
International A 1	¾	615	Wak	L	4	3⅝x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR	W-G	4	Own	Sp	39.5	B4IM	212	136	*2887	20x5.50	20x5.50
International M 2	1	850	Wak	L	4	3⅝x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR	W-G	4	Own	Sp	39.5	B4IM	217	118	3180	20x6.50	20x6.50
International A 2	1½	615	Wak	L	4	3⅝x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR	W-G	4	Own	Sp	39.5	B4IM	212	136	2935	20x6.00	20x6.00
International B 2	1½	665	Wak	L	4	3⅝x4½	186.0	21.0	39@2400	G	Mod	Mec	Mec	Ross	Zen	Vac	DR	Mec	6	Own	Sp	42.3	B4IM	212	136	2945	20x6.00	20x6.00
International A L 2	1½	1450	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Mec	Mec	Ross	Zen	Vac	DR	W-G	4	Own	Sp	42.9	B4IM*	295	138	4032	20x6.00	20x6.50D
International A 3	1½	795	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Rock	Mec	Ross	Zen	P	DR	W-G	4	Own	Sp	33.8	B4IM*	287	136	3572	20x6.00	20x6.00
International A 3½	1½	970	Lyc	L	6	3¼x4½	224.0	25.3	54@2700	G	Mod	Rock	Mec	Ross	Zen	P	DR	W-G	4	Own	Sp	34.9	B4IM*	302	136	3600	20x6.00	20x6.00D
International B 4	2	995	Own	H	6	3 x4	223.0	28.3	63@3200	G	Mod	Rock	Own	Ross	Zen	P	DR	Own	4	Own	Sp	36.0	B4IM	303	145	4300	20x6.50D	20x6.50D
International A 4	2	1750	Own	H	6	3⅜x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	P	DR	Own	5	Own	Sp	47.8	B4IH*	378	145	5221	32x6	32x6D
International W 1	2½	3850	Hall	H	4	4¼x5½	312.0	28.9	59@2000	C	Own	Own	Own	Own	Zen	Vac	RB	Own	5	Own	2R	60.5	BO4IM*	710	148	8300	36x5S	36x8S
International A 5	3	2350	Own	H	6	3½x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	P	DR	Own	5	Own	Sp	52.6	B4IM*	430	156	5895	34x7	34x7D
International A 6	3	2675	Own	H	6	3½x4½	279.0	31.5	67@2600	G	Mod	Own	Mec	Ross	Zen	P	DR	Own	5	Own	Sp	62.5	B4IM*	430	156	6120	34x7	34x7D
International W 8	3¼	4850	Hall	H	4	4¾x5½	390.0	36.1	69@2000	C	Own	Own	Own	Own	Zen	Vac	RB	Own	5	Own	2R	70.5	BO4IM*	794	160	10125	36x6S	40x12S
International A 7	5-7½	6200	Own	H	6	4½x5½	525.0	48.6	98@1800	G	Mod	Rock	Mec	Ross	Zen	P	DR	Own	5	Own	2R	52.3	BO4IM-T	730	160	11590	20x9.75	20x9.75D
International A 8	7½	6308	Own	H	6	5 x5½	650.0	60.0	115@1800	G	Mod	Rock	Mec	Ross	Zen	P	DR	Own	5	Own	2R	52.3	BO4IM-T	730	160	11590	20x9.75	20x9.75D
Mack B G	——	2500	Own	L	6	3¼x5	248.9	25.4	41@2600	G	Own	Own	Spic	Gem	Str	P	NE	Own	4	Tim	Sp	Opt	L4IH	302	148	4200	20x6.00B	20x6.00DB
Mack B L	——	3000	Own	L	6	3½x5	309.6	31.6	75@2500	G	Own	Own	Spic	Own	Str	P	NE	Own	4	Own	Sp	Opt	O4IV	427	156	4950	32x6P	32x6DP
Mack B F	——	4200	Own	L	6	3½x5	309.6	31.6	75@2500	G	Own	Own	Spic	Han	Str	P	NE	Own	4	Own	2R	Opt	O4IV	427	156	6600	20x8.25B	20x8.25DB
Mack A B-4	——	4000	Own	L	4	4¼x5	283.7	28.9	63@2100	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	Ch	Opt	O4IV	471	146½	6450	34x7P	34x7DP
Mack A B-4	——	4200	Own	L	4	4¼x5	283.7	28.9	63@2100	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	2R	Opt	O4IV	471	164½	6850	34x7P	34x7DP
Mack A B-6	——	4150	Own	L	6	3⅝x5	309.6	31.6	75@2500	G	Own	Own	Spic	Own	Str	P	NE	Own	4	Own	Ch	Opt	O4IV	471	146½	6450	34x7P	34x7DP
Mack A B-6	——	4500	Own	L	6	3⅝x5	309.6	31.6	75@2500	G	Own	Own	Spic	Own	Str	P	NE	Own	4	Own	2R	Opt	O4IV	471	164½	6850	34x7P	34x7DP
Mack B M	——	4700	Own	L	6	4 x5½	414.7	38.4	94@2400	G	Own	Own	Spic	Han	Str	P	NE	Own	4	Own	2R	Opt	O4IV	427	157	7500	20x9.00B	20x9.00DB
Mack B C	——	5500	Own	L	6	4 x5½	414.7	38.4	94@2400	G	Own	Own	Spic	Own	Str	P	NE	Own	4	Own	Ch	Opt	O4IV	590	154	8000	36x8P	36x8DP
Mack B C	——	5250	Own	L	6	4 x5½	414.7	38.4	94@2400	G	Own	Own	Spic	Own	Str	P	NE	Own	4	Own	2R	Opt	O4IV	610	154	7850	36x8P	36x8DP
Mack B X	——	5750	Own	L	6	4¼x5½	468.1	43.3	104@2300	G	Own	Own	Spic	Ross	Str	P	NE	Own	4	Own	Ch	Opt	O4IV	619	160	7900	22x9.75B	22x9.75DB
Mack B X	——	5600	Own	L	6	4¼x5½	468.1	43.3	104@2300	G	Own	Own	Spic	Ross	Str	P	NE	Own	4	Own	2R	Opt	O4IV	619	160	8050	22x9.75B	22x9.75DB
Mack B J	——	6450	Own	L	6	4½x5½	525.5	48.6	125@2300	G	Own	Own	Cle	Han	Str	P	NE	Own	4	Own	2R	Opt	O4IV	618	197	9800	22x10.50B	22x10.50DB
Mack B Q	——	6800	Own	L	6	4¾x5¾	610.6	54.1	128@2200	G	Own	Own	Cle	Ross	Str	P	NE	Own	4	Own	2R	Opt	O4IV	618	191	10000	22x10.50B	22x10.50DB
Mack A K-4	——	5150	Own	L	4	5 x6	471.2	40.0	75@1800	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	Ch	Opt	O4IV	492	174	9500	36x5S	36x5DS
Mack A K-4	——	5250	Own	L	4	5 x6	471.2	40.0	75@1800	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	2R	Opt	O4IV	492	174	9400	36x5S	36x5DS
Mack A K-6	——	6450	Own	L	6	4¾x5¾	610.6	54.1	128@2200	G	Own	Own	Spic	Han	Str	P	NE	Own	4	Own	2R	Opt	O4IV	561	186	10400	22x10.50B	20x10.50DB
Mack A C-4-L	——	4950	Own	L	4	5 x6	471.2	40.0	75@1800	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	Ch	Opt	OJXM	478	156	9100	36x5S	40x5DS
Mack A C-4-M	——	5500	Own	L	4	5 x6	471.2	40.0	75@1800	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	Ch	Opt	OJXM	478	168	9800	36x6S	40x8DS
Mack A C-4-H	——	6000	Own	L	4	5 x6	471.2	40.0	75@1800	G	Own	Own	Spic	Own	Str	Gra	NE	Own	4	Own	Ch	Opt	OJXM	478	168	10150	36x7S	40x7DS
Mack A C-6	——	6450	Own	L	6	4¾x5¾	610.6	54.1	128@2200	G	Own	Own	Spic	Han	Str	P	NE	Own	4	Own	Ch	Opt	O4IV	755	186	11400	24x10.50B	24x10.50DB
Mack A P	——	8500	Own	L	6	5 x6	706.5	60.0	138@1900	G	Own	Own	Spic	Han	Str	Gra	NE	Own	4	Own	Ch	Opt	O2IV	284	191	11700	36x7S	40x8DS
Mack A K-6 6 wheel	——	9000	Own	L	6	4¾x5¾	610.6	54.1	128@2200	G	Own	Own	Cle	Han	Str	P	NE	Own	4	Own	2R	Opt	O6IV	1044	152-52	15600	22x9.75B	22x9.75DB
Mack A C-6 6 wheel	——	8500	Own	L	6	4¾x5¾	610.6	54.1	128@2200	G	Own	Own	Spic	Han	Str	P	NE	Own	4	Own	Ch	Opt	O6IV	1052	145-52	14300	40x8P	40x8DP
Mack A P 6 wheel	——	10500	Own	L	6	5 x6	706.5	60.0	138@1900	G	Own	Own	Spic	Han	Str	Gra	NE	Own	4	Own	Ch	Opt	O6IV	1052	145-52	14600	40x8P	40x8DP
Mack A P 6 wheel	——	11000	Own	L	6	5 x6	706.5	60.0	138@1900	G	Own	Own	Cle	Han	Str	Gra	NE	Own	4	Own	2R	Opt	O6IV	1044	152-52	15950	22x9.75B	22x9.75DB
Pierce-Arrow 13S 385	2-2½	2500	Own	L	8	3½x5	385.0	39.2	125@2800	C	Long	Long	Cle	Han	Str	P	DR	Cla	4	Tim	Sp	33.5	B4IM-T	399	160	6000	20x8.25B	20x8.25DB
Pierce-Arrow 15T 298	3-3½	1950	Her	L	6	3⅜x4½	298.0	33.7	70@2600	G	Long	Long	Cle	Han	Zen	P	DR	Cla	4	Tim	Sp	40.0	B4IM	399	150	5725	20x8.25B	20x8.25DB
Pierce-Arrow 17T 361	3-4	2350	Her	L	6	4¼x4½	361.0	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Sp	34.4	B4IM	399	150	5800	20x8.25B	20x9.00DB
Pierce-Arrow 18W 361	3½-4½	3000	Her	L	6	4¼x4½	361.0	40.3	77@2400	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	41.9	B4IA-T*	473	150	6660	20x9.00B	20x9.00DB
Pierce-Arrow 19R 428	3½-4½	3600	Her	L	6	4⅜x4¾	428.0	46.0	94@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	29.6	B4IA	473	150	6860	20x9.00B	20x9.00DB
Pierce-Arrow 22R 501	4½-5½	3750	Her	L	6	4½x5½	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	36.0	B4IA	473	.50	7050	20x9.75B	20x9.75DB
Pierce-Arrow 24X 501	5-6	4200	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	40.2	T4IA	618	160	9250	20x10.50B	20x10.50DB
Pierce-Arrow 24M 611	5-6	5000	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Tim	Wo	39.9	T4IA-T	618	160	10200	20x10.50B	20x10.50DB
Pierce-Arrow 28X 501	6-7	4600	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Own	Wo	53.0	TO4IA	720	160	10675	24x10.50B	24x10.50DB
Pierce-Arrow 28M 611	6-7	5400	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Own	Wo	52.5	TO4IA	720	160	11600	24x10.50B	24x10.50DB
Pierce-Arrow 28Y 479	6-7	4400	Her	L	6	4⅝x4¾	479.0	51.3	104@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Own	Wo	53.0	TO4IA	720	160	10675	24x10.50B	24x10.50DB
Pierce-Arrow 34K 611	7½-10	5390	Her	L	6	4½x4½	361.0	40.3	77@2400	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Own	Wo	42.0	TO4IA	720	170	11675	24x10.50B	40x8DS
Pierce-Arrow 75M 779T	*75000	6400	Her	L	6	5½x6	779.0	66.1	150@1800	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Own	Wo	51.9	TO4IA	720	190	12750	24x10.50B	24x10.50DB
Pierce-Arrow 27T 361T	*27000	2450	Her	L	6	4⅜x5¾	611.0	54.1	130@2000	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Sp	48.1	B4IM	399	150	5725	20x8.25	20x8.25D
Pierce-Arrow 35R 501T	*35000	3800	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	47.8	B4IA	473	150	7050	20x9.75	20x9.75D
Pierce-Arrow 45X 501T	*45000	4800	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	57.2	T4IA	618	160	9300	20x10.50	20x10.50D
†Pierce-Arrow 34L 501S4	*34000	6600	Her	L	6	4½x5¼	501.0	48.6	110@2200	G	Long	Long	Cle	Han	Zen	P	DR	Cov	4	Tim	Wo	49.0	T6IA	1022	200	13200	20x9.75	20x9.75D
†Pierce-Arrow 44K 779S4	*44000	7500	Her	L	6	5¼x6	779.0	66.1	150@1800	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Tim	Wo	47.2	T6IA	1022	180	14500	20x10.50	20x10.50D
†Pierce-Arrow 34K 611S4	*34000	7200	Her	L	6	4¾x5¾	611.0	54.1	130@2000	G	Long	Long	Spic	Ross	Str	P	DR	Own	4	Tim	Wo	40 6	T6IA	1022	180	14200	20x9.75	20x9.75D
Reo 1 A	1½	625	Own	L	4	3⅛x4½	205.0	23.3	51@2500	G	Per	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.83	4IH	246	136	2930	20x6.00	32x6
Reo 1 C	1½	685	Own	L	4	3⅛x4½	205.0	23.3	51@2500	G	Per	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.83	4IH	246	136	3020	20x6.00	32x6
Reo 1 B	1½	795	Own	L	6	3⅛x5	230.0	23.4	68@2800	C	Own	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.28	4IH	246	140	3100	20x6.00B	32x6
Reo 1 D	1½	835	Own	L	6	3⅛x5	230.0	23.4	68@2800	C	Own	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.83	4IH	246	164	3200	20x6.00	32x6
Reo 2B	2	1095	Own	L	6	3⅜x5	268.0	27.3	75@2800	C	Own	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.83	4IH	289	142	3865	20x6.50	20x6.50D
Reo 2 D	2	1135	Own	L	6	3⅜x5	268.0	27.3	75@2800	C	Own	Long	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	5.83	4IH	289	166	4015	20x6.50	20x6.50D
Reo 2 H	†2	1625	Own	L	6	3⅜x5	268.0	27.3	75@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.6	4IH	289	142	4475	20x7.00	20x7.00D
Reo 2 J	†2	1695	Own	L	6	3⅜x5	268.0	27.3	75@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.6	4IH	289	166	4650	20x7.00	20x7.00D
Reo 2 K	†2	1765	Own	L	6		268.0	27.3	75@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.6	4IH	289	184	——	20x7.00	20x7.00D
Reo 3 H	3	2035	Own	L	6	3⅝x5	309.6	31.5	85@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	7.17	4IH	349	153	5125	20x7.50	20x7.50D
Reo 3 J	3	2085	Own	L	6	3⅝x5	309.6	31.5	85@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.5	4IH	349	170	5285	20x7.50	20x7.50D
Reo 3 K	3	2155	Own	L	6	3⅝x5	309.6	31.5	85@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.5	4IH	349	185	5400	20x7.50	20x7.50D
Reo 3 M	3	2230	Own	L	6		309.0	31.5	85@2800	C	McC	Br-L	Cle	Ross	Zen	P	DR	Own	4	Own	Sp	6.5	4IH	349	205	——	20x7.50	20x7.50D
Reo 4 H	4	3070	Own	L	8	3⅜x5	358.0	36.4	110@2800	C	Own	Long	Cle	Ross	Sch	P	DR	Own	4	Own	Sp	7.16	4IH	390	150	6210	20x9.00	20x9.00D
Reo 4 J	4	3125	Own	L	8	3⅜x5	358 0	36.4	110@2800	C	Own	Long	Cle	Ross	Sch	P	DR	Own	4	Own	Sp	6.14	4IH	390	170	6340	20x9.00	20x9.00D
Reo 4 K	4	3260	Own	L	8	3⅜x5	358.0	36.4	110@2800	C	Own	Long	Cle	Ross	Sch	P	DR	Own	4	Own	Sp	6.14	4IH	390	190	6455	20x9.00	20x9.00D
Reo 4 M	4	3260	Own	L	8		358.0	36.4	110@2800	C	Own	Long	Cle	Ross	Sch	P	DR	Own	4	Own	Sp	6.14	4IH	390	205	——	20x9.00	20x9.00D
Rockne Six	1000	†615	Own	L	6	3⅛x4⅛	189.8	23.4	70@3200	C	McC	Borg	Mec	Ross	Str	P	Aut	Own	3	Own	Sp	—	B4M	—	110	——	17x5.25	17x5.25
Stewart 41 X	¾	695	Lyc	L	6	3⅛x4½	207.0	23.44	56@2600	G	Fed	Borg	Spic	Ross	Zen	P	DR	W-G	4	Cla	Sp	5.40	B4	180	124	2875	18x6.50	18x6.50
Stewart 42 X	1½	795	Lyc	L	6	3¼x4½

INTERNATIONAL OFFERS NEW TWO-TON TRUCK

(Continued from Page 9)

generator, horn, electric head, tail and dash lights; air cleaner, speedometer, heat indicator and all necessary instruments. The chassis is painted red and the hood and cowl are lacquered in gray-green. Fenders, running boards and aprons are in black baked enamel.

The International fully enclosed two-man cab provided for the Model B-4 is of composite wood and sheet metal construction and has a wide door at each side. Seat cushions and back are upholstered in high-grade black artificial leather. A one-piece, adjustable windshield, rear-vision mirror and windshield wiper are standard cab epuipment.



SECTIONAL VIEW of the six-cylinder engine, clutch and gearset for Model B-4, International truck. Renewable cylinder liners are used

TRUCKING OFFICIAL OPPOSES REGULATORY BILL IN BAY STATE

(Continued from Page 1)

port his own goods, Beuregard said.

The speaker declared that as far as the organization he represented is concerned it would have been glad to sit down with representatives of the railroads on the problem confronting them, and see if an equitable solution could not be worked out. "However," he added, "we were never approached by the roads."

The opinion was expressed by Mr. Beauregard that the railroads make no profit on the handling of less than carload lots.

Touching upon the cost of distribution, Beauregard declared that these have been mounting for the past fifty years, and that these are now being reduced through the use of the trucks in handling transportation.

In regard to the statement that the trucks virtually are subsidized by the state because of the fact that they use the public highways, Beauregard declared that the roads are common property, and should be available to all classes of citizens.

Frederick W. Mansfield, Boston attorney, also in opposition, said that the railroads instead of attempting to lessen the degree of regulations imposed upon them are attempting to extend those to the competitors in the transportation field.

Willys and Miller Named Willys-Overland Receivers

(Continued from Page 1)

have been possible to work out the reorganization without resorting to this protective measure. It is hoped, however, that this decisive move will enable the company to carry through its production program."

The Willys-Overland, according to the plaintiff's information and belief as expressed in the petition, had current obligations of $1,500,000 and funded debt of $2,000,000, of which $1,000,000 was in default as of last September.

The company's capital liabilities are $12,776,300 in preferred stock and $14,999,410 in common stock of $5 par value. Assets and property of the company at a fair value, the petition said, are more than sufficient to cover all liabilities.

The plant has been carried at a depreciated value of $31,000,000. Investments in affiliated companies and miscellaneous advances total $1,500,000 and the inventories carried at more than $5,000,000. It is estimated that cash, accounts receivable and other current assets aggregate more than $2,500,000.

The company had been recalling workers and within recent weeks the pay roll numbered nearly 8,000 men. The company turned out 5,400 passenger cars and trucks during January, while the February schedule called for 6,000 cars and March 7,000 cars, with the new Willys 99 six-cylinder car in production within two weeks.

Sales of 54,000 shares of common stock, sending it down to 50 cents a share, came as an intimation of an important action. Quotation of 12 on the preferred stock markel a drop of more than five points in a day.

If the property and assets are sold as a going concern, the petition said, the valuable organization and good will might be preserved for the creditors and stockholders. While having on hand inventories of raw materials and finished products, the petition said the company has not now sufficient cash to meet liabilities as they mature.

Toronto, Feb. 16.—Willys-Overland, Ltd., of West Toronto and Willys-Overland-Crossley Ltd., of Stockport, England, are not included in the reseivership for the Willys-Overland Company of Toledo, O., T. A. Russell, president of the Canadian and English organization, said tonight.

"The Canadian and English companies are separate organizations, and their financial arrangements are entirely separate from those of the American company," he pointed out.

Major Specifications and Mechanical Details of 1933 Commercial Cars

LEADING MAKES NATIONALLY DISTRIBUTED

(Continued from Page 11)

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	Valve Arr'g'm't	No. of Cyls.	Bore and Stroke	Piston Disp.	Tax H. P.	Max. Brake H.P. and Peak R. P. M.	Type Camshaft Drive	Radiator Make	Clutch Make	Universals Make	Steering Gear Make	Carburetor Make	Fuel Feed Type	Make Electr'l System	Make Transmission	No. Spds. For.	Rear Axle Make	Type Final Drive	Final Gear Reduction	Type Service Brakes	Area Service Brake Lining	Standard Wheel Base	Chassis Wgt.	Standard Tire Sizes Front	Rear
White 630 L	*17000	5000	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	Sp	37.3	L4IHV	553	157	8500	20x9.00B	40x9.00DB
White 618-618A	*18000	3600	Own	L	6	3¾x4½	299.0	33.7	77@2400	C	Own	Own	Spic	Ross	Zen	Vac	DR	Own	5	Own	2R	57.2	L4IHV	349	166	6775	20x9.00B	20x9.00DB
White 621	*18000	4650	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	Sp	41.4	OL4IHV	484	157	7945	20x9.00B	20x9.00DB
White 640	*20000	6100	Own	H	6	4⅝x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	Sp	33.9	O4IA	553	180	9200	20x9.00B	20x9.00DB
White 630	*20000	5000	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	Sp	41.4	O4IHV	553	168	8500	20x9.00B	20x9.00DB
White 58	*22000	4400	Own	L	4	4½x5¾	326.0	28.9	54@1600	G	Own	Own	Spic	Ross	Zen	Vac	Eis	Own	4	Own	2R	49.7	OPXM	224	180	7797	36x5	36x8SD
White 630 A	*22000	5000	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	Sp	41.4	O4IHV	553	168	8500	20x9.00B	20x9.00DB
White 641	*24000	6450	Own	H	6	4⅝x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	46.9	O4IA	633	180	9700	20x9.75B	20x9.75DB
*White 630 SW200	*24000	6245	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Tim	Wo	44.2	OTIHV	677	193	10000	20x8.25B	20x8.25DB
White 631	*24000	5750	Own	H	6	4 x5¼	396.0	38.4	92@2100	C	Own	Own	Spic	Ross	Zen	P	DR	Own	4	Own	2R	66.2	O4IHV	633	168	9000	20x9.25B	20x9.25DB
White 642	*28000	6750	Own	H	6	4⅝x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	66.8	O4IA	633	180	10600	24x9.75B	24x9.75DB
White 58 SS	*30000	5300	Own	L	4	4½x5¾	326.0	28.9	54@1600	G	Own	Own	Spic	Ross	Zen	Vac	L-N	Own	4	Own	2R	77.6	OPXM	224	196	9300	24x10.50B	24x10.50DB
White 643	*32000	6950	Own	H	6	4⅝x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Own	2R	66.8	O4IA	633	180	10900	24x10.50B	24x10.50DB
White 601	*32000	7250	Own	H	6	4⅝x5¾	580.0	51.3	127@2050	C	Own	Own	Spic	Ross	Zen	P	DR	Own	5	Own	2R	63.0	O4IA	623	129½	12200	24x10.50B	24x10.50DB
*White 642 SW320	*34000	8025	Own	H	6	4⅝x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Tim	Wo	55.6	OTIA	833	198	12670	20x9.00B	20x9.00DB
*White 613 SW420	*40000	8550	Own	H	6	4⅞x5¾	519.0	45.9	118@2100	C	Own	Own	Spic	Ross	Zen	P	L-N	Own	4	Tim	Wo	69.1	OTIA	833	198	14400	40x8	40x8D
Willys 77	——	——	Own	L	4	3½x4¾	134.2	15.6	48@3200	C	Fed	Own	Own	Sag	Til	P	Aut	Own	3	Own	Sp	4.3	B4IM	134	—	——	17x5.00B	17x5.00B

GENERAL NOTATIONS

***†REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

ENGINE—Bud, Buda; Con, Continental; Cum-D, Cummings-Diesel; Her, Hercules; Lyc, Lycoming; Pont, Pontiac; Wak, Waukesha; Wis, Wisconsin; Hall, American Car & Foundry; Ster, Sterling Engine Co

VALVE ARRANGEMENT—L, "L" head; H, in head, O. overhead; S. sleeve.

TYPE OF CAMSHAFT DRIVE—G, gear; C, chain.

RADIATOR MAKE—G&O, G. & O. Mfg. Co.; Per, Perfex Corp; Long, Long Mfg Co.; Har, Harrison Radiator Corp; Fed, Fedders Mfg. Co.; McC. McCord Radiator & Mfg. Co.; Mod, Modine Mfg. Co.; Hex, Hexcel Radiator Co. Yo, Young.

CLUTCH MAKE—Jon, Jones Clutch & Gear Co.; Ful, Fuller & Sons Mfg. Co.; Borg, Borg & Beck Co.; Br-L, Brown Lipe Gear Co.; Rock, Rockford Drill & Machine Co.; Cov, Covert Gear Co.; Long, Long Mfg. Co.; Detr, Detroit Gear & Machine Co.; Mer, Merchant & Evans; Hel, Merchant & Evans.

UNIVERSALS MAKE—Spic, Spicer Mfg. Co.; Blo, Blood Bros. Machine Co.; Sup, Superior Universal Products; Un, Universal Products Co.; Cle, Cleveland Steel Products Corp.; Pet, Peters; Opt, optional; Mec, Mechanics Machine Co.

STEERING GEAR MAKE—Ross, Ross Gear & Tool Co.; Han, Hannum Mfg. Co. Sag, Saginaw Steering Gear Co.; Gem, Gemmer Mfg. Co.; Col, Columbus Gear & Pump Co.; W-G, Warner Gear Corp.

CARBURETOR—B&B, Ball & Ball; Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, gravity; Vac, vacuum tank; P, fuel pump.

ELECTRICAL SYSTEM — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; NE, North East; RB, Robert Bosch; DR, Delco-Remy.

TRANSMISSION—Br-L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cot, Cotta Gear Co.; Cla, Clark Equipment Co.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Pont, Pontiac; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—IG, internal gear; Bt, straight bevel; Sp, spiral bevel; Wo, worm; 2R, double reduction; Ch, chain; S-T, semi-transverse.

TYPE OF SERVICE BRAKES—

B4IM, Bendix, 4 wheel internal mechanical; B4MV, Bendix, 4 wheel, mechanical, vacuum; B6IA, Bendix, 6 wheel, internal, air; B4IMV, Bendix, 4 wheel internal mechanical, vacuum; BO4IMV, Bendix, own, 4 wheel, internal, mechanical, vacuum; BrIA, Bendix, operating on 4 rear wheels, internal air; BW4IM, Bendix front, Wisconsin rear, 4 wheel, internal, mechanical; BE4IM, Bendix front, Eaton rear, 4 wheel, internal, mechanical; B4IH, Bendix 4 wheel, internal, hydraulic.

CB4IM, Columbia, Bendix, 4 wheel, internal, mechanical; C4IM, Columbia, 4 wheel, internal, mechanical; K2IM, Clark, 2 wheel, internal, mechanical; CR4IA, Christensen-Relay, 4 wheel internal, air.

L4IHVA, Lockheed, 4 wheel, internal, hydraulic, vacuum, air; LO4ID, Lockheed, own, 4 wheel, internal, drive shaft; LO4IV, Lockheed, own, 4 wheel, internal, vacuum, LT4DV, Lockheed, Timken, 4 wheel, drive shaft, vacuum; L4IH, Lockheed 4 wheel, internal, hydraulic; L4IHA, Lockheed 4 wheel, internal, hydraulic, air; L4IHV, Lockheed, 4 wheel, internal, hydraulic, vacuum; LT4IHV, Lockheed, Timken, 4 wheel, internal, hydraulic, vacuum; LT4IVA, Lockheed, Timken, 4 wheel, internal, vacuum, air; L6IHV, Lockheed, 6 Wheel, internal, hydraulic, vacuum; L6IH, Lockheed, 6 wheel, internal, hydraulic.

O2IM, Own, 2 wheel, internal, mechanical; O2IV, Own, 2 wheel, internal, vacuum; O4IA, Own, 4 wheel, internal, air; O4IH, Own, 4 wheel, internal, hydraulic; O4IHV, Own, 4 wheel internal, hydraulic, vacuum; O4IM, Own, 4 wheel, internal, mechanical; O4IV, Own, 4 wheel, internal, vacuum; O4M, Own, 4 wheel, mechanical; O2XM, Own, 2 wheel, external, mechanical; O4XM, Own, 4 wheel, external, mechanical; O6IA, Own, 6 wheel, internal, air; OJXM, Own, jack shaft, external, mechanical; OL4IHV, Own, Lockheed, 4 wheel, internal, hydraulic, vacuum; OPX, Own, propeller shaft, external; OPXM, Own, propeller shaft, external, mechanical; OPM, Own, propeller shaft, mechanical; ORIV, Own, rear wheels, internal, vacuum; OTIHV, Own Timken, internal, hydraulic, vacuum.

S4IM, Steeldraulic, 4 wheel, internal, mechanical.

T4rIA, Timken, operating on 4 rear wheels, internal, air; T4IA, Timken, 4 wheel, internal, air; T6IA, Timken, 6 wheel, internal, air; T2IMV, Timken, 2 wheel, internal, mechanical, vacuum.

VB—Vacuum Booster.

W4I, Westinghouse, 4 wheel, internal; W4IA, Westinghouse, 4 wheel, internal, air; 46IA, Westinghouse, 6 wheel, internal, air; 4IA. 4 wheel, internal, air; 4IH. 4 wheel, internal, hydraulic; 4M, 4 wheel, mechanical.

-T, True-stop. *Models on which Trustop is optional.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

***CHASSIS WEIGHT** according to Automotive Daily News formula, which is the chassis with gas, oil, water and spare tire, but without cab or other equipment.

TIRES—B, balloon; D, dual, S, solid; P, pneumatic.

SPECIAL NOTATIONS

AUTOCAR

*For tractor use only.
**Six wheeler driving from 4 rear wheels.
***Engines in these models are located under driver's seat.

BROCKWAY

*Models equipped with twin ignition.

DIAMOND T

*Six-wheelers.

Additional standard wheel base available as follows:

510	158	750	167, 192
504A	166½	801	180½, 199½
506A	174	1201	174½, 180
603	157, 179	1602	174½, 180
606B	177½	1603	184

DODGE

*Models F40, F41, F61 and F62 can be had with double drop frame.
†Six wheelers.

FEDERAL

†Six-wheelers.
*Also rated in pounds at total allowable weight as follows:

D 3	8,500	A 600 S W	20,000
E 3	8,500	A 600 D	20,000
F 7	10,000	U S	21,000
F 8	11,500	U 6 D R	21,000
A 6	13,500	A 6 S W	18,500
A 6 T	15,000	C 7	24,000
A 6 T W	15,000	C 7 W	24,000
T 3 W	14,000	C 8	24,000
T 8 W F	15,000	C 8 W	24,000
D 2 8 W	12,500	X 8	30,000
E 2 S W	12,500	X 8 D R	30,000
D 2 D	12,500	X 8 R	30,000
2 E D	12,500	X 8 R D R	30,000
A 600	15,000	A 600	15,000
A 600 T	17,000	A 600 T	17,000
A 600 T W	17,000	A 600 T W	17,000
A 600 T D R	17,000	A 60 T D R	17,000
T 10 B	18,000	A 600 S W	20,000
T 10 W	18,000	A 600 D	20,000
T 10 D R	18,000	T 3 W F A	16,000

†Both the four and six cylinder are also offered in 157-inch wheel base at $1,145 and $1,345, respectively.
Model T 10 SW also available in 206 and 224 inch wheel bases.

FORD

†Chassis price on 8-cyl, model not available at this time.

GENERAL MOTORS TRUCK

*Capacity indicated is the Straight Rating (combined weight of chassis body, equipment and pay load) for which each chassis is designed and guaranteed to satisfactorily operate under average conditions. The size of the tires used does not affect this Straight Rating, but to secure maximum tire mileage it is suggested that the total gross weight be limited to a "recommended gross weight" for each tire equipment based on tire capacity. Prices cover base chassis and vary with wheel base and tire combinations. The number of wheel base lengths, tire types, range of "recommended gross weights" and ton range for each model follow:—

Note: Models T-15 to T-61, inclusive, are available for export only as coach chassis.

Model	Wheel Bases	Tire Types	Range of "Rec. Gross Weights"	Ton Range
T-15	3	10	4500- 6500	½-1½
T-18 (200)	2	..	7500- 8200	1½-2
T-18 (221)	2	..	7500- 8500	1½-2
T-19	4	..	7500-10000	1½-2½
T-23 (200)	2	..	8500-10000	2-3
T-23 (221)	3	..	8500-10500	2-3
T-25	3	17	6800- 9000	1½-2
T-26	4	..	9000-11000	2-3
T-30	3	15	10000-12500	2-3
T-31	4	..	11000-14000	2½-4
T-33	4	..	11000-13000	3-3½
T-42	4	12	12000-15000	2½-4
T43	4	..	12500-16000	3½-4½
T-44	4	12	12000-16000	3-4½
T-45	4	..	13500-16000	3-4½
T-51	4	..	16500-19000	4-5½
T-51H	4	..	16500-22000	5-6½
T-60	4	18	18500-22000	5-6½
T-61	4	..	19500-22000	5-6½
T-82	4	12	19000-24000	5-7
T-83	4	..	20000-25000	5-7½
T-85	3	..	25000-30000	6-8
T-85H	4	..	25000-34000	8-9½
T-90	3	..	22000-28000	5-7½
T-95	2	..	30000-40000	9-11
T-110	3	..	32000-40000	10-12
T-130	3	..	42500-50000	12-15

Optional rear axle gear ratios available for all models. Double reduction axles available for Models T-43, T-45, T-51, T-60, T-61, T-82, T-83 and T-95.

GRAMM

Series	Straight Rating	Wheel Base	Pay Load Range
AX 4	8,000	157	1 to 1½ tons
AX 6	8,000	157	1 to 1½ tons
BX 4	10 000	157	1½ to 2 tons
BX 6	10,000	157	1½ to 2 tons
CX 4	12,000	157-180	2 to 3 tons
CX 6	12,000	157-180	2 to 3 tons
B	12,000	157-174	1¾ to 2½ tons
CXH	13,400	157-180	2 to 3 tons
C	14,000	145-196	2 to 3 tons
EX	16,300	145-210	3 to 4 tons
D	17,000	145-196	2½ to 4 tons
E	20.000	145-224	3 to 4½ tons
ED	20,000	145-210	3 to 4½ tons
EY	.....	.....	3 to 4 tons
G	24,000	165-235	4 to 6 tons
G 8	24,000	165-235	4 to 6 tons
GY	.....	.....	4 to 5 tons
GW	28,000	157-240	5 to 7½ tons
GWD	30,000	157-240	5 to 7½ tons
HY	.....	.....	5 to 6½ tons

†Both the four and six-cylinder are also offered in 157-inch wheel base at $1,145 and $1,345. respectively.

Larger engines and corresponding transmissions, clutches, propeller shaft, axles, etc., are provided on all models of Gramm trucks at extra cost when type of service requires them. Wheel bases, cab to rear of frame, and cab to center line of axle designations may change to suit the special requirements.

Wisconsin double reduction axles are available in all series, except AX and BX.

Gross vehicle weight indicated for each model in the table is the straight rating (combined weight of chassis, body, equipment and payload) for which the chassis is designed and guaranteed to satisfactorily operate under average conditions. Tire sizes should be selectd within the tire manufacturers rating to carry the gross load desired which must not exceed the straight rating.

INDIANA

*Six-wheelers.

INTERNATIONAL

Brake H. P. values given for International motor trucks are net values obtained with all standard equipment accessories running.

PIERCE-ARROW

*Optional final drive on models except "S" and "T" series.
†Six-wheelers.

REO

Model 2 D can be secured in 166-inch wheel base at $1,095.
†Heavy duty.

ROCKNE

†Price includes panel body.

STEWART

Model 41X also supplied 134-inch wheel base.

Models 42X and 43X also supplied in 145, 160, 176-inch wheel base.

Model 29XS can be supplied in 135, 160, 176 and 190-inch wheel base.

*Models 18X and 32X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27XS can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment Models 18X, 19X, 31X and 27XS can be supplied with Timken dual reduction rear axle.

Models 38-8, 38-6, 48-8 and 58-8 can be supplied in 160, 170, 180, 196, 226 and 241-inch wheel base and worm axle.

WHITE

Six-wheelers.

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